CHAPTER - VI

FINDINGS, DISCUSSION, CONCLUSION
LIMITATIONS AND SUGGESTIONS
The primary purpose of this study was to explore the relationship of goal orientation, parental inducement of academic self-regulation, metacognitive skills and academic achievement. The findings of the present study are:

**FINDINGS**

Analyzing the results of the present study the following findings and conclusions may be summarized:

1. Parental inducement of academic self-regulation was found to be more strongly positively related with learning goal orientation than performance goal orientation.

2. Parental inducement of academic self-regulation was found to be positively related with metacognitive skills and academic achievement.

3. Learning goal orientation as compared to performance goal orientation was found to be more strongly positively related with metacognitive skills and academic achievement.

4. Metacognitive skills and academic achievement were found to be positively related.

5. Further, regression analysis revealed that parental inducement of academic self-regulation was the most significant predictor of academic achievement as compared to other significant predictors i.e., learning goal orientation and metacognitive skills, whereas performance goal orientation was found to be the non-significant predictor of academic achievement.

6. Parental inducement of academic self-regulation was found to be the more significant predictor of Hindi academic achievement as compared to metacognitive skills, whereas learning and performance goal orientation were found to be non-significant predictors of Hindi academic achievement.

7. Parental inducement of academic self-regulation was found to be the most significant predictor of Mathematics academic achievement.
as compared to learning and performance goal orientation and metacognitive skills.

8. Learning goal orientation was found to be the most significant predictor of Science academic achievement as compared to parental inducement of academic self-regulation, performance goal orientation and metacognitive skills.

9. Parental modeling, facilitation and encouragement, as compared to parental rewarding, were found to be the most potent components of parental inducement of academic self-regulation.

10. Self-checking was found to be more dominant factor of metacognition as compared to cognitive strategy.

11. High achievers as compared to low achievers showed more self-confidence to face new challenges, used various cognitive strategies for academic pursuits, had caring and encouraging parents.

DISCUSSION

Relationship among Goal Orientation, Metacognitive Skills and Parental Inducement of Academic Self-Regulation:

The results of the present study show that learning as compared to performance goal orientation was found to be more positively related with metacognitive skills. 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. The basic metacognitive strategies are: (i) Connecting new information to former knowledge, (ii) Selecting thinking strategy deliberately, planning, monitoring, and evaluating thinking processes. Interest in metacognition has led to new research on learning processes in school setting. Studies based on the information processing approach in the development of models of metacognition have particularly focused on the self-regulatory processes, and have identified important components of self-regulation permitting effective learning 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 (Berkowski et al., 1990, Bouffard-Bouchard, Parent, & Larivee, 1993). Some studies have tried to identify and explain the personal characteristics that could act as mediator of a learner's self-regulation (Bandura, 1986, Corno, 1986). A body of research has suggested that the type of super-ordinate goals pursued by individuals in achievement situation could be a contributing factor in deliberate self-regulation of academic task (Ames, 1992; Dweeck, 1986). Two different kinds of goal orientation have been identified in the literature, Pintrich (Pintrich, 1990; Pintrich & Garcia, 1991) has suggested that goals may be characterized by an intrinsic desire (mastery) to learn or an extrinsic reason (good grades). Therefore, a person who wishes to acquire knowledge and new skill will be most likely to recognize the value of learning processes and will acknowledge the positive role of effort expenditure as a means to develop and master newly acquired knowledge and skills. Wey (1999) studied the effects of goal orientation, metacognition, self-efficacy and effort on writing achievement. The result concluded that learning goal orientation had stronger relationship on metacognition, self-efficacy and effort than performance goal orientation. Self-efficacy has positive and significant effects on metacognition orientation. Metacognition had an indirect influence on writing achievement through the effect of effort. These results support the findings of the present study.

The results of present study showed that learning as compared to performance goal orientation was found to be more positively associated with parental inducement of self-regulation. The results of the present study also showed that metacognitive skills and parental inducement of self-regulation are positively related. The results of the present study may be interpreted that the home environment, the educational aspirations that parents have for their offsprings and the level of autonomy they provide to their children increase self-efficacy in them. Social learning theory as applied to the family views that parents
form the personalities of their children via their own behavior as agenda
setters, reinforcers, and models. According to Baldwin (1906) child's
personality in general, and self-concept in particular, undergoes
continuous modification as a result of the feedback from significant others.
The results obtained in the present study are in consonance with those
obtained by Martinez-Pons (1996) that parental inducement of self-
regulation significantly predicted students' academic achievement through
mediation of student self-regulation behavior. This is the reason that the
greater degree of parental inducement of self-regulatory behavior was
found to be highly positively correlated with the learning goal orientation
and low positive association was found with performance goal orientation.
The greater degree of parental inducement of self-regulatory behavior
enhances the willingness to engage in more challenging problems, to try
out new strategies for completing task and to risk using more sophisticated
strategies. Of the many strategies that people use, two seem to be very
pervasive across many situations, the mastery strategy and the
performance strategy. It is helpful to think of these strategies as
orientations. These strategies are not rational or conscious; rather, they are
implicit theories that develop through processes such as modeling,
instruction, and construction. The mastery strategy can be defined in terms
of a general belief system that involves three interrelated beliefs: the belief
that one can acquire the skills, can control the environment through the
development of skills; and the belief that one has the capacity to create
happiness and health. Dweek's (1991) theory suggested that the mastery
strategy grows out of the belief that intelligence is incremental. Through
work and effect, people can change their intelligence and their ability to
adapt to the world.

People who develop a mastery strategy learn to take credit
for their actions. Further, they come to develop a generalized belief that
they can effect change through their ability to learn and develop new
skills. Their continued development of new skills is rewarded and
sustained by the feelings of self-efficacy that accompany the development of each new skill. Typically, they feel pride at their achievements.

The performance strategy can also be defined in terms of a belief system that involves three interrelated beliefs: that one can achieve what one wants by learning the rules for winning; the winning is an acceptable way to get ahead; and that happiness is the result of winning. The performance-oriented persons tend to be concerned with the outcomes, whereas the mastery orientation is concerned with the process.

Mastery oriented individuals are sustained by the feelings of self-efficacy they gain from effectively dealing with the world; the process is the source of their motivation. Performance oriented individuals, in contrast, are sustained by winning that is, by the outcome. While skills are often involved in winning, performance oriented individuals do not necessarily view themselves as having skills. Rather, they see themselves as using tactics, such as undermining other people. As a result, it is more difficult for them to take credit for their successes. This distinction does not mean that mastery types do not like to win, nor that performance-oriented persons are not interested in experiencing feelings of self-efficacy, but they have a different focus or emphasis. There is considerable evidence that experiencing feeling of efficacy is the more powerful motivation of behavior in the long run (Deci & Ryan, 1991).

According to Bandura (1991) the most central of all mechanisms of self-regulation is self-efficacy, defined as expectations that focus on beliefs about their capabilities to organize and execute the behaviors requisite for attaining the outcome. Researchers in educational psychology (e.g. Ames & Archer, 1988; Miller, et al., 1993) have suggested that a learning goal orientation predisposes individuals to use self-regulation strategies in pursuit of their mastery focus. Kanfer (1990a) found that individuals with performance goal orientation are less concerned with mastery, and should thus be less predisposed to use self-regulation strategies than individuals with a learning goal orientation.
The results of the present study show that parental inducement of academic self-regulation (PIASR) and academic achievement are found to be positively related. The explanation for this, based on social learning theory, may be that children learn from their observation of adults that one way to get what they want from life is to gain knowledge and develop skills. Modeling is the process by which individuals secure what they want from life. The social cognitive literature has demonstrated the pervasive effect of modeling on learning. Bandura (1969) showed the effect of modeling on general social behavior and Rosenthal and Zimmerman (1978) showed the influence of modeling on the learning of intellectual content.

Other studies showed that when children are encouraged to be independent or to master, they tend to develop higher academic achievement. Work has been done to show a relation between strategy and success in school. Indeed, the entire concept of self-regulation has burst upon the motivation scene to reflect the connection between specific strategies and performance outcomes, exemplified by the considerable work of Schunk and Zimmerman (e.g., Schunk, 1989; Schunk and Zimmerman, 1998; Zimmerman and Martinez-Pons, 1988). Strategies that have been shown to have a particular impact on achievement (Zimmerman, 1989) are self-observing, self-judging and self-reacting (e.g., goal setting, planning, and more recently, self-evaluation and monitoring, goal setting and strategic planning, strategy implementation and monitoring, and strategic outcome monitoring (Zimmerman, 1998).

Johnson and McGillicuddy-Delisi (1983) found that children's knowledge of rules and conventions was related to social class variables but parental behavior were predictive of children's level of knowledge above and beyond demographic characteristics. Affective feedback behavior from parents were predictive of child outcome, suggesting that early socialization models consistent with social learning theory are more
appropriate at the pre-school age than parental induction or distancing techniques that are directed at the child’s cognitive processes.

The results of the present study may be interpreted on the basis of the model of parental inducement of academic self-regulation given by Martinez-Pons (1996). One hundred and five elementary school students were surveyed to assess their perceptions of (a) their parents’ influence on their academic self-regulation and (b) their own academic self-regulatory behavior. Their standardized academic achievement scores were also recorded. Path analysis disclosed that parental self-regulation inducement significantly predicted student academic achievement through mediation of student self-regulatory behavior. Another explanation is based on the research work, which has identified a set of motivational ‘inner resources’ necessary for school success (Grolnick et al., 1991). Three resources have been theorized to be crucial to intentional behavior. First, if an individual is to act intentionally, he or she must know how outcomes are linked to his or her behavior; this is the issue of control understanding. Second is perceived competence. Finally, children must experience their behavior as autonomous or choiceful (Ryan & Connell, 1989). For example one could know how to achieve outcomes and feel competent to do so but feel pushed or compelled into behavior. Thus self-regulation is a key resource for school competence that can be learned by their parents.

The results of the present study indicated that learning as well as performance goal orientation were significantly positively related with academic achievement, though learning goal orientation had a more strong relationship as compared to performance goal orientation. These findings are in consonance though partially with the findings of Phillips and Gully’s (1997) study in which they used a longitudinal field study with undergraduate students and found a significant positive relationship between learning goal orientation and exam scores and a non-significant relationship between performance goal orientation and exam scores. Button et al. (1996) found a significant positive relationship between a learning goal orientation and grade point average and a non-significant
relationship between a performance goal orientation and grade point average. Learning and performance goal orientation are important because of their association with characteristic patterns of how individuals interpret and respond to achievement situations. With a learning goal orientation, individuals pursue an adaptive response pattern in that they persist, escalate effort, engage in solution-oriented self-instruction, and report enjoying the challenge. This pattern is predictable because they view effort on a challenging task as instrumental to achieving their desired goal or personal development. With a performance-goal orientation, however, individuals pursue a maladaptive response pattern, in that they withdraw from the task, make negative ability attributions, and report decreased interest in the task.

Krishnamurthy (2000) studied the achievement in history as related to academic achievement motivation. It is reported that there is significant positive relationship between achievement motivation and academic achievement in history.

MacGyvers (1992) has found that a learning goal orientation has a positive relationship with academic achievement (i.e., grade-point average) and that a performance goal orientation has a neutral or negative relationship with academic achievement. A learning goal orientation was associated with several of the qualities so vital to academic success—optimism, conscientiousness, openness to experience, and enjoyment of hard work. In contrast, a performance goal orientation was associated with an opposing personality pattern—pessimistic, close-mined and a shunning of hard work. VandeWalle (1997) has reported that a learning goal orientation is associated with conscientiousness and with a desire to work hard. Goal orientation should predict the self-regulation patterns of students because a learning goal orientation is associated with an interest in mastery and hard work and optimism. Finally, goal orientation may predict how much individual will benefit from training programs. A learning goal orientation has a positive relationship with openness to experience and a negative relationship with fear of negative evaluation.
Openness to experience and fear of negative feedback have opposite relationship with both a prove dimension and an avoid dimension for a performance goal orientation. Given these patterns, individuals with a high learning goal orientation should have a stronger interest than individuals with a high performance goal orientation to take the risk to actually implement what they have learned in a training program. Conscientiousness is consistent with the cognitions of individuals with a learning goal orientation because they view hard work and perseverance as strategies for developing and manifesting ability. In contrast, individuals with a performance goal orientation are less interested in hard work because they view the need to work hard as an indicator of low ability. They also do not persevere in the face of difficulty. Individuals with a learning goal orientation believe that they can develop their ability and that hard work is a means to success. These beliefs give one good reason to be optimistic about future outcomes. In contrast, individuals with a performance goal orientation believe that ability rather than effort is the cause of success and that ability is difficult to develop. When faced with task difficulty or task failure these individuals may feel 'stuck' rather than optimistic.

The results of the present study are also being supported by the study conducted by Sinha and Gupta (2000). They studied the effect of locus of control and goal orientation on academic achievement among college students. A 2 (Locus of control : Internal vs. External) x 2 (Learning goal orientation : High vs. Low) x 2 (Performance goal orientation : High vs. Low) design was used. The results indicated the insignificant main effect of locus of control on academic achievement and a significant effect of learning as well as performance goal orientation.

The results of the present study also indicated significant positive relationship between metacognitive skills and academic achievement. These findings support the view that individuals rely on two relatively independent sources of knowledge when completing a test. One source is domain specific content knowledge that leads directly to better
performance. Another source is domain-general metacognitive knowledge that guides performance assessment. One explanation is that individuals use general strategies such as focusing attention and reviewing their test responses to enhance their monitoring. Another explanation is that monitoring experience within specific domain is gradually generalized until it becomes a metacognitive skill that spans all cognitive domains. An interesting account of this developmental sequence was first proposed by Pressley et al. (1987). These researchers described the good information processing model as suggesting that skilled learners (a) first acquire specific strategy knowledge within a domain, (b) use this knowledge to construct conditional meta-knowledge about when and where to use strategies, and (c) eventually construct general strategy meta-knowledge that is applicable across multiple domains. The study conducted by Chan (1996) compared the motivational orientation and metacognitive abilities of 143 grade 7 intellectually gifted students from a selective high school in comprehensive schools. Results revealed a general pattern of the gifted sample perceiving themselves to be cognitively more competent, thus less likely to attribute failures to lack of ability. In comparison with average achieving peers, gifted students had greater confidence in their own personal control over successes or failures in school tasks, demonstrated more knowledge of learning strategies, and achieved higher levels of reading competence. The findings also revealed different patterns of relationships among motivation, metacognition, and academic competence for gifted students and the general control.

Montague and Bos (1990) investigated the cognitive and metacognitive characteristics of 60 VIII graders in mathematical problem solving. Differences among high achieving (HA), average achieving (AA), low achieving (LA), and learning disabled (LD) subjects on measures of math achievement, reasoning, math problem solving, strategy knowledge, use and control were studied. LD and LA subjects differed significantly from AA and HA subjects in both general math achievement and math problem solving.
Ehrlich et al. (1993) examined cognitive, metacognitive and motivational factors as predictors of individual differences in the reading comprehension abilities of 64 good readers and 63 poor readers identified from a pool of 220, 7th grade students in Paris. Good readers scored higher on the word recognition measure, possessed higher metacognitive knowledge, and has more positive beliefs about their academic abilities.

Landine (1998) examined the relationship between metacognition and certain personality variables and the role they play in academic achievement. The results indicated significant positive relationship between metacognition, motivation, locus of control, self-efficacy, and academic average. It was concluded that metacognition and these personality variables are related to academic achievement.

Relative Contribution of Predictor Variables:

Multiple regression analysis revealed PIASR as most significant predictor of academic achievement as compared to two other significant predictors i.e. learning goal orientation and metacognitive skills whereas performance goal orientation was found to be a non-significant predictor of academic achievement. This may be interpreted that Bandura (1969) described the mechanics of the learning processes through which people acquire behavior tendencies, and described a self-system through which people monitor and evaluate their behavior. When parents tell children why and not just what to do, they provide a rationale for future action. Then children learn not only how to get a particular task done, but what to do when faced with new problems (Brown et al. 1983). Zimmerman (1986) points out that students are—metacognitively, motivationally, and behaviorally active participants in their own learning process; metacognitively, self-regulated learners are persons who plan, organize, self-instruct, self-monitor, and self-evaluate at various stages of the learning process, motivationally, self-regulated learners perceive themselves as competent, self-efficacious, and autonomous, behaviorally, self-regulated learners select, structure, and create environments that optimize learning. Most of the research on self-regulated learning in
academic settings has focused on the effective strategies that students use to perform different academic tasks such as completing homework, comprehending text, or preparing for tests (Zimmerman & Martinez-Pons, 1990). Grolnik et al. (1991) suggested that parents' behavior does not affect the child through skill building, as has been traditionally assumed, but through its impact on children's attitudes and motivations related to school. This theory represents the child as an active processor of information and a constructor of scheme as about him or herself.

The other significant predictor of academic achievement is learning goal orientation. People develop different strategies or orientations for dealing with the work. People with a learning orientation or mastery strategy deal with the work by developing competency, feeling of efficacy, reward the development of competency. Mastery type individuals tend to be process-oriented and they have better academic achievement as compared to subjects with a performance goal orientation, which is the non-significant predictor of the academic achievement in the present study. People with a performance strategy deal with the work by learning the rules of winning. Performance type individuals tend to be outcome oriented and their short-term achievement is better than long-term achievement because they do not learn the strategy for learning. People with a mastery and achievement orientation have a sense of agency (Bandura, 1989). They take action so that they get what they want from life. Psychologists often characterize the person who is inclined to make things happen as instrumental. To make things happen, such individuals set goals and make plan to attain those goals. Moreover, as Bandura (1989) has pointed out, they are not undermined the first time they fail to attain their goal. Instead, they adjust their plan or simply make a new plan. In the final analysis, people who take control also take responsibility for their action. They take responsibility not only for successes but for their failures.
Relative contribution of various predictors for Hindi, Mathematics and Science Achievement:

The results of the present study also indicated that PIASR was found to be significantly positively related with academic achievement i.e., Hindi, Mathematics, and Science. Learning goal orientation was also found to be significantly positively related with academic achievement i.e., Hindi, Mathematics and Science. The significant positive relationship was also found between metacognition and academic achievement i.e., Hindi, Mathematics and Science. There was found to be very low positive relationship between performance goal orientation and academic achievement i.e., Hindi, Mathematics and Science. Multiple regression analysis suggested that PIASR is more significant predictor of Hindi academic achievement as compared to other significant predictor i.e., metacognition, whereas performance and learning goal orientation were not found to be significant predictors of Hindi academic achievement. PIASR was found to be the most potent significant predictor of Mathematics academic achievement as compared to other significant predictors i.e., learning and performance goal orientation and metacognitive skills. Learning goal orientation was the most significant predictor of Science academic achievement as compared to other significant predictors i.e., PIASR, metacognitive skills and performance goal orientation. These findings are in consonance, though partially, with the findings of Nicholls' (1996) study. The effects of a form of cooperative group instruction on student motivation and achievement in a high school geometry class were examined. Eighty 10th - 12th grade students were randomly assigned to either a control group receiving traditional instruction or one of two-treatment group receiving cooperative learning instruction. Results indicated that students in the cooperative treatment group exhibited significant greater gains than the control group in geometry achievement, efficacy, intrinsic valuing of geometry learning goal orientation, and reported use of deep processing strategies. O'Neil et
al. (1996) investigated the relative effectiveness of different financial incentives and goal orientating instruction on mathematics performance. Results indicate that at least for 8th graders, financial rewards and goal orientating instruction offered at the time of test taking can increase effort and associated metacognitive ability, which can increase mathematics test scores, particularly on easier items. Malpass et al. (1999) investigated the effects of gender, self-efficacy, learning goal orientation, self-regulation and worry on high-stakes mathematics achievement of mathematically gifted 10-12th grade high school students. Using a structural equation modeling framework, analysis showed that self-efficacy was positively related to mathematics achievement, was moderately and positively related to self-regulation and was highly and negatively related to worry, and that learning goal orientation was positively related to self-regulation and worry but was not related to self-efficacy or high-stakes mathematics achievement.

Yu (1997) examined the self reported motivational (self-efficacy) and cognitive (cognitive strategy use, metacognition, self-regulation) correlates of achievement for 603 college chemistry students, particularly for female and minority students who earned lower grades in the course than their classmates. Regression showed that the motivation and cognitive variables helped explain grade beyond gender group membership. Under-achievers tended not to be strategic or to endorse adaptive motivational beliefs, while over-achievers seemed to compensate for their low aptitude with greater strategy use and adaptive motivational beliefs. The findings provide evidence for the importance of cognitive and motivational variables in models of student learning.

Maqsud (1997) examined the effects of metacognitive skills and nonverbal ability on academic achievement of high school pupils. Data analysis revealed that both metacognitive ability and nonverbal reasoning ability have significant positive association with Mathematics and English achievement scores.
Relative contribution of various components of PIASR towards Academic Achievement Scores:

The results indicated that parental modeling, facilitation and encouragement were most important components of parental inducement of academic self-regulation. Rewarding is the external motivation while self-regulatory behavior is internally motivated behavior which is enhanced by modeling, encouragement and facilitation rather than rewarding by parents. Only a few studies has been reported identifying specific forms of parental behavior affecting students' self-regulation of academic performance or examining the relative effects of such parental and student processes on school success. Martinez-Pons (1996) tested the model of parental inducement of academic self-regulation. Factor analysis disclosed that measures of parental modeling, encouragement, facilitation and rewarding of the students' self-regulation loaded on a factor separate from, but related to academic achievement, and parental facilitation and rewarding were the most important factors as compared to parental modeling and encouragement. But in the present investigation modeling, encouragement and facilitation were found to be the most dominating factors of PIASR. These results may be interpreted that as the parents can overtly manifest involvement through their behavior by going to the school and participating in activities such as open houses etc., may be modeling the importance of school to their children. Further, such behavior may provide the parents with information so that they can help the child manage his or her schooling (Baker & Stevenson, 1986). Self-regulation behavior is self-instructed behavior that is not learned by extrinsic incentive or reward. Deci (1972) found that intrinsic motivation was less when subjects were given an external reward but greater when they were given verbal praise. According to Deci and Ryan (1985) rewards reduce intrinsic motivation by undermining feelings of competence and self-determination. They argue that extrinsic rewards place the motivation for learning outside the individual and, as a result, the individual no longer experiences feelings of competency and self-determination.
According to many current theorists, the self is both learned and constructed (Deci & Ryan, 1991). It is learned by internalizing the beliefs and attitudes of those around us, such as parents and teachers; it is constructed by developing new beliefs as a result of interactions with the environment.

Parents play an important role, often by providing the kind of environment that allows to develop self-regulated behavior. When parents emphasize or encourage early independence and mastery, children score higher on academic work. Generally the child who scores high on academic achievement has parents who encourage them, for instance, to do well in school, to look after their possessions, and to try hard things by themselves.

**Relative contribution of various factors of metacognition:**

As results indicated that self-checking was the more dominant factor in the metacognition as compared to cognitive strategy. O'Neil and Abedi (1996) found that cognitive strategy and self-checking were the important components for 8th grade students and awareness and planning are the important components for 12th grade students. The explanation based on Flavell's (1979) argument is that younger children have extremely limited metacognition; they seldom monitor their memory, language, problem solving, or decision making. They are not yet aware that words are easier to remember when they are part of a narrative, rather than a list; they also do not realize that the gist of a passage is easier to remember than verbatim recall (Kreutzer, Leonard, & Flavell, 1975). Important component of metacognition is the awareness that if one really wants to remember something, one must make an effort (Flavell & Wellman, 1977). Schneider (1984) pointed out that correlation between metacognition and performance is lower when metamemory is assessed in terms of children's knowledge about memory strategies (Cavanaugh & Borkowski, 1980; Cavanaugh & Perlmutter, 1982).
Discussion: Interviews Data

Analysis of data obtained through interviews indicate that high achievers have more learning goal orientation tendency, metacognitive skills and self-regulated behavior that is induced by their parents, as compared to low achievers who have more performance goal orientation tendency. This may be interpreted that parents' behaviors are important because children are likely to internalize their parents' behavior. If parents value education, for example, their children will be inclined to value education. As a result, their self-regulation will be more affected by their performance at school than by their performance in other domains.

Self-regulation can be nurtured and parents play a primary role in that nurturing process. Parents of children with high self-regulation are characterized by total acceptance of, and respect for, the child; a tendency to set clearly understandable goals on what the child is permitted and not permitted to do; and a tendency to allow the child great latitude to explore and test within those goals. Parents of children with high self-regulation create a climate that frees the child from anxiety and doubts. Within such an environment, the child can explore freely and in so doing, gain competence. Parents of children with high self-regulation not only encourage the children to become responsible and competent but accept the independence and diversity of expression that accompany the emergence of such behavior. In other words, the children learn from their parents a significant source of self-regulatory behavior. It becomes amply clear that the attitude of parents and teachers matters a great deal: supportive attitudes develop security and confidence, and help mature confidence, and help mature the subject better and vice-versa.

The analysis of interview data also made it explicit that the low achievers are oriented towards scoring marks with the help of cheap guide books etc., and they are deficient to use appropriate strategies for enhancing their knowledge and learning. They appear to be performance goal oriented, whereas high achievers learning goal oriented. This may be explained as Dweck (1991) has suggested that understanding differences in
achievement and competency of learning goal orientation and performance goal orientation is by understanding the implicit theories that people have about the origins of achievement and competency. She argues that some people view competency in terms of the skills and knowledge they now possess. Other people view competency in terms of their ability to acquire skills and knowledge. Individuals of the first type subscribe to an entity theory; they see intelligence as fixed. Individuals of the second type subscribe to an incremental theory; they see intelligence as changeable. For reasons that are still not completely clear, some people believe that learning stops at a certain age or that their capacity to learn is limited and that, therefore, no matter how hard they work, there is little hope for real change. Such people regard their possibilities as limited. People who hold the incremental theory, on the other hand, believe that the only thing that limits their ability to learn and develop new skills is their willingness as virtually unlimited; how much they think they can learn. People who hold an incremental theory tend to choose challenging tasks that call upon them to stretch themselves whereas people who ascribe to an entity theory tend to choose task that are more in line with their abilities. People who perceive themselves to be low in ability and who hold an entity theory are inclined to choose relatively easy task, because they are likely to succeed in such tasks and consequently, they can avoid judgments about their lack of competency. The net result is that people with low perceived ability who hold to an entity theory are inclined to avoid challenges and to choose easy tasks. Dweck and Leggett (1988) contend that avoiding a challenging activity is a maladaptive strategy, whereas the tendency to select challenging tasks is adaptive. Because most achievement involves overcoming obstacles, acquiring skills, and persisting in the face of setbacks, they argue, it is important to be dispositionally disposed to select challenging tasks. According to Dweck’s model, people who believe in the entity theory are motivated to select goals that will indicate they do have intelligence and to avoid goals that might provide evidence that they lack intelligence. Research indicates that, when these people experience failure,
they tend to attribute it to lack of intelligence (Dweck, 1986). Thus failure can be devastating to people who hold to the entity theory. For this reason they learn to avoid challenges. These people may become low achievers in order to avoid the failure they fear. According to Dweck (1986), people who believe in the incremental theory tend to select that will enable them to increase their competence. She incorporates the idea that people with a generalized belief that they can control important things in their lives are inclined to engage in mastery behavior. Since the development of competence at any task usually requires persistence, belief in the incremental theory of intelligence turns out to be very adaptive in the process of setting and attaining goals. Both rewards and failure simply provide feedback to the individuals.

With reference to metacognitive skills the results of the present study are in consonance, though partially, with the findings of Yu's (1997) study. This study examined the relation of self-competence, strategy use on a memory task, and achievement for 68 middle and high school students identified as underachievers and comparison students achieving at grade. ANOVA's showed that students identified as underachieving reported lower cognitive self-competence than did comparison students. Regression showed that type of strategy used was the best predictor of performance on the task.

The analysis of the interview data has revealed that most of the low achievers lack self-confidence and suffer from pre-examination anxiety. This is one of the important reason for their poor achievement according to their parents.

Theories of instruction draw from cognitive psychology by focusing on models of learning, typical development, and individual differences in children. A thorough picture of an individual's cognitive competence and academic knowledge is helpful when selecting or applying instructional methods (Das et al. 1994). Naglieri and Gottling (1997) found differential effects of cognitive instruction designed to facilitate planning depending on the specific cognitive characteristics of the
individual students. The results showed that teaching control and regulation of cognitive activity had beneficial effects for all students but was especially helpful for those who were poor in planning as defined by Das et al. (1994).

Montague (1997) suggested that learning disabled children generally need explicit instruction in problem solving strategies. Self-efficacy training enhances strategy based performance by promoting self-regulation to evaluate effectiveness of strategies and revise and change strategies based on their efficacy (Groteluschen, Borkowski, & Hales, 1990). It has been found that cognitive strategy instruction, which focused on problem solving deficiencies, improved the academic performance and strategic knowledge of learning disabled children. Wong (1993) found that the cognitive strategy instruction in domain-specific strategies led to better problem solving performance as compared to instruction in general strategies.

CONCLUSIONS

The findings of the present study led to conclude that parental inducement of academic self-regulation is an important factor of academic achievement of eighth grade students. Learning goal orientation as compared to performance goal orientation and metacognitive skills contribute to a significant extent towards academic achievement.

LIMITATIONS AND SUGGESTIONS

1. The study was conducted on a limited sample of 250 students. Thus study on a larger sample is needed for generalization.

2. The present study is limited in its scope as survey was confined to the students of Hindi medium schools, other type of schools too should be included.

3. The research is limited in its scope as it takes perception of parental inducement of self-regulation, learning goal orientation, performance goal orientation and metacognition as important predictors for academic achievement, where as some other variables e.g., family climate and teacher’s self-regulatory behavior, teaching
methods, school environment etc. are also important for determination of academic achievement.

4. Finally all data were collected from self-reports. Further researches should take some other methods of data collection e.g. observation, experimental etc. because social desirability may be there in self-report.

5. To measure academic achievement, researcher, due to paucity of time, has constructed tests only for three subjects viz., Hindi, Science and Mathematics, whereas other subjects i.e. Social Studies, English etc. are also important subjects of academic achievement.

IMPLICATIONS OF THE RESULTS

The results of the present study have placed parents in a meaningful educational context. The present findings have several implications for parents and students. Findings of the research show that parents should learn how to increase their children’s self-regulatory behavior, which could lead to better academic achievement. Thus, the results of the present study show that parental inducement of self-regulation in terms of parents’ modeling, encouragement, facilitation and rewarding of their children’s self regulatory behavior is an important factor in students’ school success.

Parents can foster children’s self-regulation skills by pointing out the special demands of task, encouraging the use of strategies, and emphasizing the value of self-correction. The parents can overtly manifest involvement through his or her behavior by going to the school, and participating in activities such as open houses. If the child experiences this behavior, the parent may be modeling the importance of school. Further such behavior may provide the parent with information so that they can help the child manage his or her schooling (Baker & Stevenson, 1986).

Parents and teachers could model metacognitive behavior, using techniques such as thinking out loud during problem solving, explaining the process of deciding how to attack a problem or issue, doing some explicit self-monitoring for comprehension, checking the final
answer. In many homes, the parents use metacognitive prompts, such as what is the goal of this exercise? What is relevant and irrelevant? and What strategies will be useful? This instruction is helpful to learn metacognitive strategy.

The cognitive strategy instruction can be effective for students with learning disabilities when (I) providing students with sample instructional examples with systematic modeling, (ii) encouraging interactive dialogues with peers, (iii) scheduling programmed practice with transfer tasks, (iv) asking students to verbalize their rationale for selecting and using particular strategies, and (v) teachers being cognizant of the notion that strategy instruction may not be appropriate for all students, and that instruction must be tailored to individual student.

Teachers should undergo in-service training, demonstrations and practice teaching in special skills as might be organized by educational institutions, to get trained as resource teachers who promote metacognitive skills within the students with a keen understanding of their problems, capacities, feelings and qualities. They can use the best available audio-visual aids and new methods of teaching instead of sticking to traditional methods. These resource teachers can train their students to learn metacognitive skills.

The present investigation has tended to emphasize that there is the positive relationship of learning/performance goal orientation, metacognition and academic achievement. Thus, if, prediction can be made in the early stages of student’s academic careers then this would seem to be of some personal, institutional and economic value. Self-regulation, the ability to control one’s cognition and behavior to attain goal is associated with academic success in higher education. For a variety of reasons, some students are entering colleges and universities without being able to self-regulate their academic behavior. Therefore, the present research suggests an implication for the students entering from their schooling to colleges and universities to get better academic results.
Goal orientation complements the recognition of a need because it gives direction to activity; the feeling of need must be channeled in a given direction toward a rather well defined goal before learning can result. The practical implication is that; if one is going to learn much of what there is to learn in the academic subjects he/she is now taking, and learn it well, he/she must be keenly aware of what he/she must know and why he/she is learning it. A vague feeling that a course must be passed, accomplished by a foggy view of its relationship to one’s present and future activities, can never result in learning that is appreciable in quality or amount. On the other hand the goal-oriented person has well defined objectives and generally exhibits superior performance when compared with other learners.

Academic performance to a considerable amount depends upon one’s regulation of his/her own behavior. One sets performance goals for oneself and reacts with self-criticism or self-satisfaction to one’s behavior depending on how well it matches to one’s expectations and standards.

The findings of the present research would be of importance as these would suggest students the ways to enhance self-regulation, metacognition and consequently their academic achievement.