CHAPTER II

REVIEW OF RELATED LITERATURE
An essential aspect of an investigation is the review of related literature, that is, a general retrospective survey of the previous writings pertaining to a new problem. Review of related literature provides elaborate and comprehensive understanding of a research subject. It is obviously imprudent and wasteful to proceed on such a study without knowing what had been done before. The review of representative studies in concerned areas is a necessary scientific prelude to develop a perspective and plan of the present research project, therein, the investigator has considered only recent important studies which have touched the spirit and sphere of the present investigation to some extent. For convenience, these studies have been arranged in chronological order under the following heads:


**GOAL ORIENTATION AND ACADEMIC ACHIEVEMENT:**

A Learning goal orientation and a performance goal orientation have been found to have differential effects on academic achievement.

Harackiewicz et al. (1997) investigated personality predictors of achievement goals in an introductory psychology class, as well as the consequences of these goals for the motivation and performance of 311 undergraduates. Two dimensions of achievement motivation predicted the goals endorsed. Individuals high in workmastery were more likely to adopt mastery goals and less likely to adopt work avoidance goals, whereas competitive individuals were more likely to endorse performance and work avoidance goals. Students adopting mastery goals were more interested in the class, but students adopting performance goals achieved higher levels of performance. These results suggest that both mastery and performance goals can lead to important positive outcomes in college classes.

A goal orientation framework hypothesized by Kaplan and Midgley (1997) proposes that learning goals are associated with adaptive patterns of behavior, regardless of the level of perceived ability. In contrast, perceived ability is hypothesized to moderate the relation between performance goals and patterns of adaptive or maladaptive behavior. The authors examined this hypothesis in 2 samples.
of 229 7th grade middle school students, focusing on the math domain in one sample and on the English domain in the other. Using 2 different statistical methods, median split and multiple regression, the authors found only little support for the role of perceived competence as a moderator between performance goals and patterns of behavior. Contrary to what has been suggested, some evidence was found that perceived competence moderated the relation between learning goals and behavior.

Traditionally, theorists have described motivation in terms of approach and avoidance tendencies. In contrast, goal orientation research has focused primarily on two approach goals: demonstrating ability (performance-approach) and developing ability (task). A scale to assess the goal of avoiding the demonstration of lack of ability (performance-avoid) was included with scales assessing approach goals in a survey given to 703 6th graders. Factor analysis supported the differentiation among the 3 scales. The performance scales were moderately positively correlated and exhibited low correlations with the task scale. With all 3 goals in regression equations, task goals predicted academic efficacy, self-regulated learning, and lower levels of avoiding seeking academic help in the classroom. Performance-avoid goals negatively predicted academic efficacy and positively predicted avoiding seeking help and test anxiety. Performance-approach goals did not emerge as the most significant predictor of any of these educationally relevant outcomes (Middleton & Midgley, 1997).

The relationship between environment, emotions, and goals; specifically, whether emotions and perceptions of teachers both contribute to goal orientation, or do emotions mediate the influence of perceptions of teachers on goal orientation was examined by Seifert (1997). Ss were 559 Grade 10 students (average age 16.5 yrs) in Newfoundland and Labrador. Two structural equations were postulated: one in which students' affect mediated the influence of perceptions of teachers on goal orientation and one in which students' affect contributed to goal formation in addition to perceptions of teachers. A cluster analysis of affect scores was performed followed by between-group and within-group contrasts of goal orientation scores. The structural equation model in which emotions mediate the influence of perceptions of teachers on goal orientation fit the data better than the model in which perceptions of teachers directly predicted goal orientation. The cluster analysis showed that groups with different profiles of affect pursued different goals. Emotions seem to be directly
linked to goal orientation. Teachers who are perceived as nurturing will foster feelings of self-assuredness and control in students which will lead to a learning orientation.

Skaalvik (1997) has identified two main goal orientations: task orientation and ego orientation. Two studies of 6th- and 8th-grade Norwegian students tested the prediction that there are different dimensions of ego orientation (self-defeating and self-enhancing), that they may be separated from other goal orientations, and that they relate differently to academic achievement, self-concept, self-efficacy, self-esteem, anxiety, and intrinsic motivation. Results from both studies supported the predictions. The correlation between self-defeating and self-enhancing ego orientation was small, and these constructs had different relations to other variables in the study. Self-defeating ego orientation was associated with high anxiety and was negatively related to achievement and self-perceptions. Self-enhancing ego orientation was positively related to achievement, self-perceptions, and intrinsic motivation.

Young (1997) examined the longitudinal relations between motivation and cognition and the role of students' perceptions of the classroom context in facilitating effective learning. The current study examined these issues from a goal orientation theory perspective using a sample of middle school students. Data on 306 students' personal motivational beliefs and cognitive strategy use as well as perceptions of the classroom goal structures were gathered using surveys. Differences between the motivational and cognitive relations within the English and math subject areas and gender differences were also examined. Results suggest that motivation and cognition are reciprocally related over time. In addition, perceptions of classroom context were found to have an explanatory effect over and above the variance explained by prior measures of motivation and cognition. The implications for this work include the notion that student motivation can be enhanced through instruction in cognitive strategy use as well as through alteration of classroom goal structures so that there is a stronger emphasis on tasks and learning rather than on grades or external recognition.

Bouffard et al. (1998) examined how combined learning and performance goals are related to self-regulation and academic performance, and whether there is a developmental trend in these relations. 408 junior (mean age 11.9 yrs), 323 middle (mean age 13.7 yrs), and 341 senior (mean age 15.7 yrs) high school students were administered the Learning subscale of the Learning and Performance Orientation
Questionnaire to assess their learning and performance goals and report their self-regulatory strategies while studying. Analyses showed that whatever their performance goals, having high learning goals promoted younger students' self-regulation. They also showed that, contrary to the findings for younger students, performance goals were related to self-regulation and academic performance at higher school levels. Furthermore, high performance goals were found to alleviate the negative effects of low learning goals for older students. These findings suggest that the adaptive nature of goals could change across development.

Conscientiousness and goal orientation were examined by Colquitt and Simmering (1998) as (a) predictors of motivation to learn and (b) moderators of reactions to performance levels during the learning process, using an Expectancy x Valence framework. Learners (N = 103) participated in a 6-week course in which an objective performance goal was assigned. Results indicated that conscientiousness and learning orientation were positively related to motivation to learn both initially and after performance feedback was given, whereas performance orientation was negatively related to motivation to learn at those two time periods. In addition, learning and performance orientation moderated the relationships between performance levels during the learning process and subsequent expectancy and valence.

The means by which volitional control protected the intention to learn and maintained the attempts to learn was tested by Garcia et al. (1998). 487 college students from an educational psychology class and an introduction to statistics class completed measures concerning motivation, learning strategies, and volition. It was found that the positive effects of intrinsic goal orientation and self-efficacy on cognitive engagement were augmented by volitional control. It was also found that the effects of volition differed by domain as well as by the type of learning strategy being considered.

Does being successful at school mean the same thing for all children? In Australia, research posits that Aboriginal Australian, Anglo Australian, and immigrant Australian children embrace different learning goals (i.e., mastery, performance, or social) according to their culture. In this study, a 38-item inventory was used to measure similarities and differences between Aboriginal (n = 496), Anglo (n = 1,173), and immigrant (n = 487) Australian students' learning goal orientations by McInerney.
et al. (1998). In contrast to existing conceptions, these findings indicate that the profiles of Aboriginal, Anglo, and immigrant students were remarkably similar, with students embracing a mastery orientation of academic success. Nevertheless, there were significant (albeit small) differences among the groups, and these differences indicated that Aboriginal students are more influenced by social goals.

Lee and Han (1998) investigated the degree of career attitude maturity according to personal characteristics and psychological variable of high-school students in Korea. Ss were 2,007 students (1st yr-3rd yr high school; 861 male and 1,146 female) from 7 high schools (1,039 Ss from academic high schools and 968 Ss from vocational high schools) in Korea. Measures were the relationship between constructs of career attitude maturity: decisiveness, goal orientation, confidence, preparation, and independence; and personal characteristics: sex differences, curricula, and grade level; and psychological variables: self-esteem, work value, and locus of control. Tests used were the Tennessee Self-Concept Scale, the Occupational Value Scale, and Rotter's Internal-External Locus of Control Scale. The results show that generally female students tend to score higher on the construct of goal orientation and preparation; that males tend to score higher on the construct of confidence and independence; and that academic high-school students tend to score higher than vocational high-school students.

The extent to which changes in students' self-reported positive and negative affect across the transition to middle school are explained by their perceptions of the achievement goal orientation in their classes, sense of school belonging, and their social goals were examined by Anderman (1999). Surveys were given to 444 students in the 5th grade in elementary and again in 6th grade in middle school. Hierarchical regression analyses indicate that student's perceptions of a task goal orientation in their classes, school belonging, relationship and responsibility goals predicted increased positive affect in 6th grade. An ability goal orientation predicted increased negative affect, while school belonging was inversely related to negative affect. A significant interaction effect indicates that a task goal orientation was inversely related to negative affect but that this relation was moderated by students' level of endorsement of status goals.

Bembenutty (1999) examined college students' academic delay of gratification. Academic delay of gratification, its motivational determinants (i.e.,
importance, utility, interest, perceived cost of success, and social expectancy), and students' use of motivation regulation strategies were examined among students identified on the basis of their task-goal orientation, performance-approach-goal orientation, and performance-avoidance-goal orientation using a hierarchical cluster analysis (N = 102). The results supported the notion that academic delay of gratification and its motivational determinants differed as a function of goal orientation. Students in Cluster 1, the high task-goal oriented learners, are high in delay of gratification and have high motivation. Students in Cluster 2, labeled combined high task-high-performance approach, considered the delay of gratification's alternatives as important and useful while perceiving the nondelay alternatives as highly interesting and socially beneficial. Students in Cluster 3 were low in all of the three goal orientations and reported low preference for delay of gratification.

The question of whether intrinsic objectives, such as subject-matter appreciation, can coexist to any degree, in the face of competing, if not higher, loyalties that involve a performance ethic based on scrambling for extrinsically oriented rewards, such as high grades, and avoiding punishments in the form of failing grades was explored by Covington (1999). The author reviews the research of a large-scale investigation exploring the nature of intrinsic motivation and its relationship to the various extrinsic rewards that dominate classroom life. Five separate yearly cohorts of 500 undergraduate students per year participated in a series of interlocking studies conducted under actual classroom conditions. The author argues that the findings indicate that the pursuit of high grades and valuing what one is learning are not necessarily incompatible goals as long as certain conditions prevail. More specifically, students are more likely to value what they are learning and to enjoy the achievement process more (1) when they are attaining their grade goals, (2) when what they are studying is of personal interest, and (3) when the dominant reasons for learning are task oriented, not self-aggrandizing or failure avoidant.

The study by Dupeyrat et al. (1999) examined the existence of two distinct dimensions within learning goals: a mastery dimension and a challenge seeking dimension. A French version of Goals Inventory was administered to 305 psychology undergraduates (mean age 22.7 yrs old). Confirmatory factor analyses testing two-factor vs. a three-factor measurement model supported the distinction between the two
dimensions of learning goals. Relations between goal orientations and reported strategy use and self-regulation were analyzed. The mastery and challenge dimensions within learning goals were differentially related to performance goals and strategy use.

The motivational differences in self-regulated academic goal-setting between individuals who fall at different points along the continuum of future time orientation was examined by Lasane and Jones (1999). This study tested the hypothesis that those with relatively higher levels of future time orientation would report higher levels of academic goal setting than those lower on this dimension. It was further hypothesized that the relationship between temporal orientation (the tendency to focus attention on the past, present or future) and academic goal setting behavior would be mediated by aspects of self-motivation on which Ss differ. 81 college students completed a survey instrument assessing academic goal setting and the evaluation of the goal-setting process. These data confirmed researchers' key predictions that time orientation is related to academic goal setting through the mediating effects of internalization, self-efficacy, and locus of control.

It was predicted that academic goals (Performance-Approach, Performance-Avoidance, and Mastery) would mediate the relationship between action-control beliefs (Agency for Ability, Effort, Luck, Others, and Control Expectancy Beliefs) and achievement-related outcomes (Intrinsic Motivation, Test Anxiety, and Academic Achievement) by Lopez (1999). Results indicated that goals: (1) mediate the relationship between action-control beliefs and intrinsic motivation; (2) partially mediate the relationship between action-control beliefs and test anxiety; and (3) did not mediate the relationship between action-control beliefs and academic achievement. The strength of the mediational relationship varied as a function of achievement-related outcome.

Whether there was gender differences in associations between males' and females' mastery and extrinsic goal orientations and measures of self-regulated learning (self-efficacy, cognitive, and regulatory strategies) and performance were investigated by Patrick et al. (1999). Survey data from 445 seventh- and eighth-grade students (aged 11-15 yrs) at both the beginning and end of the year indicated that males were more extrinsically oriented than females, whereas females reported
greater use of cognitive strategies than males. Regression analyses indicated that for males an extrinsic goal orientation at the beginning of the year was related to decreased self-efficacy, less use of regulatory and cognitive strategies, and decreased performance at the end of the year. Females' extrinsic orientation did not affect any of those outcomes. Females' mastery orientation at the beginning of the year predicted increased self-efficacy, and increased use of regulatory and cognitive strategies at the end of the year. There were no positive effects over time for males holding a mastery orientation.

Peiro Velert (1999) studied the possibility of a relationship between adolescent physical education (PE) students' goal orientations and their perceptions of the motivational climate created by significant adults (PE teachers and parents). Ss were 101 male and 127 female secondary school students aged 13-15 yrs in Spain. The Task and Ego Orientation in Sports Questionnaire and an instrument based on this questionnaire and on the Perceptions of Success Questionnaire were administered to assess adolescents' dispositional goal orientations and perceptions of significant adults' criteria for judging adolescents' success in sports activities. Canonical correlations were computed. The results suggest that a relationship exists between PE students' goal orientations and their perceptions of the motivational climate created by important adults (mainly the mother for female Ss and the father for male Ss). The findings also showed a high task orientation for all Ss.

Students' achievement goal orientations, learning strategies, and the relationship between them were identified by Somuncuoglu and Yildirim (1999). One hundred and eighty-nine students enrolled in an undergraduate educational psychology course completed a questionnaire on goal orientations and learning strategies. Results indicated that most of the students were close to mastery orientation and somewhat ego-social. Students used deep cognitive strategies often; they used surface and metacognitive strategies occasionally. Mastery orientation predicts use of deep cognitive and metacognitive strategies; when such an orientation is salient; however, less surface cognitive strategy use is expected. Ego-social orientation predicts surface cognitive strategy use but does not relate to deep and metacognitive strategy use. Work-avoidant orientation negatively correlates with deep cognitive and metacognitive strategy use.
The role of task factors in goal orientation by comparing motivational orientation scores obtained by 78 college students on an ordinary class day to those obtained immediately prior to a test was investigated by Cordon and Johnson (2000). Results show that task-involvement scores were significantly lower under test conditions, but ego involvement was also found to significantly decrease at the time of a test. This suggests that the observed decline in intrinsic motivation is not due to the effects of ego involvement.

Galand and Gregoire (2000) studied 240 fifth and sixth graders to see if evaluation practices of teachers have an effect on student goal orientation and self-concept. Teachers completed questionnaires on evaluation practices while the students completed a measure of motivational orientation and a measure of self-concept. Evaluation practices of teachers do impact student motivation and self-concept. Task orientation had a positive association with all self-concept areas except math which was closely related to ego orientation.

Gupta and Sinha (2000) studied the effect of locus of control and goal orientation on academic achievement among 176 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 a significant interaction effect of locus of control, learning and performance goal orientation on academic achievement scores.

Guthrie, Wigfield and VonSecker (2000) studied the effects of instructional context on intrinsic and extrinsic motivation. This quasi experiment compared students receiving an instructional intervention designed to increase intrinsic motivation with students receiving traditional instruction. Concept-oriented reading instruction (CORI) integrated reading and language arts with science inquiry. It emphasized learning goals, real-world interaction (hands-on science activities), competence support (strategy instruction), autonomy support (self-directed learning), and collaboration. Traditional classrooms had the same content objectives and comparable teachers but different pedagogy. Children in CORI classrooms scored higher on motivation than did children in traditional classrooms. Grade-level
differences were found for recognition and competition. The results show that classroom contexts can be constructed to influence motivational outcomes positively.

The interrelations between dimensions of perfectionism and measures of academic motivation and learning strategies in 207 university students was investigated by Mills and Blankstein (2000). Self-oriented perfectionism was significantly related to students' motivation and learning strategies in positive, adaptive ways whereas socially prescribed perfectionism was related in negative, maladaptive ways. Self-oriented perfectionists were motivated primarily by extrinsic compensation for their academic work whereas socially prescribed perfectionists were more motivated by recognition from others. Self-oriented perfectionism was significantly positively associated with self-efficacy for learning and performance, adaptive metacognitive and cognitive learning strategies, and effective resource management. Socially prescribed perfectionism was associated negatively with these measures. In addition, self-oriented perfectionism was associated positively with intrinsic goal orientation for a specific course, task value, and critical thinking whereas socially prescribed perfectionism was associated with test anxiety and a decreased likelihood of help-seeking.

An initial step in extending Deci and Ryan's (1985) self determination theory to the investigation of motivation in second language (L2) learning, the 1st goal of this study was to assess the validity and reliability of a scale of intrinsic and extrinsic motivation for L2 learning by Noels et al. (2000), and the 2nd purpose was to examine the relations between these types of motivation and the 4 orientations. 159 Ss (aged 18-50 yrs) were given the Language Learning Orientations Scale--Intrinsic Motivation, Extrinsic Motivation, and Amotivation Subscales. The results generally supported the psychometric integrity of the scale. The results are discussed with reference to how intrinsic and extrinsic motivations are relevant to theorizing on the role of orientations in L2 motivation.

Mastery goals have been linked to adaptive outcomes in normative goal theory and research; performance goals, to less adaptive outcomes by Pintrich (2000). In contrast, approach performance goals may be adaptive for some outcomes under a revised goal theory perspective. The current study addresses the role of multiple
goals, both mastery and approach performance goals, and links them to multiple outcomes of motivation, affect, strategy use, and performance. Data were collected over 3 waves from 8th and 9th graders (N = 150) in their math classrooms using both self-report questionnaires and actual math grades. There was a general decline in adaptive outcomes over time, but these trends were moderated by the different patterns of multiple goals. In line with normative goal theory, mastery goals were adaptive; but also in line with the revised goal theory perspective, approach performance goals, when coupled with mastery goals, were just as adaptive.

Rao et al. (2000) examined the relationship between cognitive and motivational variables and their relationship to mathematics attainment. 94 Hong Kong-Chinese students enrolled in schools for high-, average-, and low-achievers completed the Motivated Strategies for Learning Questionnaire--Chinese Version (MSLQ-CV) and the Mathematics Motivation Questionnaire (MMQ) in Year 10 and 12 month later in Year 11. The 4 scales of the MSLQ-CV were: self-efficacy, intrinsic value, test anxiety, and strategy use. The 4 scales of the MMQ were: self-concept of mathematics ability, ego-involved motivation, and task involved motivation, and perceptions of parents' views about school performance. Low-achievers perceived academic learning as being less useful over time and reported spending less time studying in Year 10 than in Year 11 but high- and low-achievers did not differ on their use of self-regulated learning strategies. Performance on a public examination in mathematics was predicted by prior achievement and self-concept of mathematics ability. Results underscore the importance of considering cultural beliefs systems and educational systems in models of academic motivation.

Sinha and Kumari (2000) examined the relationship between children's perception of parental inducement of academic self-regulation, learning/performance goal orientation and strategy use among 80 eighth grade children. Significant positive correlation coefficients were found between parental inducement of self-regulation scores and learning goal orientation scores and negative correlation coefficients were found between parental inducement of self-regulation scores and performance goal orientation scores. Significant positive correlation coefficients were found between parental inducement of self-regulation scores and deep processing strategy use scores.
and negative correlation coefficients were found between parental inducement of self-regulation scores and shallow processing strategy use scores.

Yamauchi and Miki (2000) examined the relations among students' perceptions of their teachers' and parents' attitudes (attitudes of mastery and performance goal orientations), achievement goal orientations (mastery, performance and work-avoidance orientations), and learning strategies (deep processing, surface processing and self-handicapping strategies). Participants were 235 seventh grade and 169 ninth grade students in a private junior high school. Significant grade differences and sex differences were found in several of the variables mentioned. Some interaction effects were also significant. Canonical correlation analyses were used to investigate the relations of students' perceptions with achievement goal orientation's and learning strategies for the seventh and the ninth grade students. Implications of the results are discussed.

Bong (2001) used confirmatory factor analysis to examine between-domain relations of self-efficacy, task-value, and achievement goal orientations among 424 Korean middle and high school students. All motivational constructs demonstrated strong subject specificity in both age groups. Strengths of between-domains differed substantially by individual constructs. Performance-approach and performance goals were highly correlated across domains, whereas task-value and mastery goals were more distinct across domains. Self-efficacy perceptions were moderately correlated across subjects. High school students' academic motivation was more differentiated than that of middle school students. Within-domain interrelations among these motivation constructs were generally consistent with previous research. More important, consistent patterns of relations were observed in four different academic domains within each age group.

Sharma and Aradhana (2001) investigated the effects of similarity/dissimilarity and ego/task involvement on help seeking behavior. Findings indicated that help seeking behavior would be less on ego involvement than on task involvement and more help was sought when the partner was dissimilar than similar.

Sinha and Kumari (2001) examined the effect of goal orientation and perception of parental inducement of academic self-regulation on academic
achievement. A 2 (Parental inducement of academic self-regulation: High vs. Low) x 2 (learning goal orientation: High vs. Low) x 2 (performance goal orientation: High vs. Low) factorial design was used. The results show the significant effect of type of goal orientation and parental inducement of self-regulation on the academic achievement. Learning goal orientation in interaction with parental inducement of academic self-regulation showed better academic achievement.

The effects of approach and avoidance achievement motives (the motive to achieve success and the motive to avoid failure) on 3 orientations (mastery, performance-approach, performance-avoidance goals) and the effects of goal orientations on intrinsic interest in learning and academic achievement for 157 10th and 135 11th grade students of a Japanese girls' high school were investigated by Tanaka and Yamauchi (2001). Structural equation modeling indicated that mastery goals arose mainly from the motive to achieve success; however, the positive relation between the motive to avoid failure and mastery goals was also found. Performance-approach goals were related to both the motive to achieve success and the motive to avoid failure. Performance-avoidance arose mainly from the motive to avoid failure; however, the positive relation between the motive to achieve success and these goals was found. Mastery goals positively correlated with intrinsic interest and academic achievement, and scores on both performance-approach goals and performance-avoidance goals had no significant effects on either intrinsic or academic achievement.

VandeWalle et al. (2001) examined the relationship of goal orientation and performance over a series of 2 challenging performance events. After providing performance feedback on the 1st event, the authors found that the relationship between a learning goal orientation and performance remained positive for the 2nd event, the relationship between a proving goal orientation and performance diminished from a positive to a nonsignificant level, and the relationship between an avoiding goal orientation and performance remained negative. Data analysis also indicated that the relationships between the three goal orientation dimensions and the performance event were differentially mediated by goal setting, self-efficacy, and effort.
LOCUS OF CONTROL AND ACADEMIC ACHIEVEMENT:

Students (n = 319) enrolled in associate degree programs at a small college completed the Myers-Briggs Type Indicator as well as measures of academic procrastination (PCT), self-efficacy, and locus of control in a study by Ferrari et al. (1992). Frequent PCT and reasons for PCT were, overall, not significantly related to the typologies nor locus of control, but were negatively related to general self-efficacy. Task aversiveness as a motive for PCT also was negatively related to general self-efficacy. Multiple regression analyses of self-reported scores indicated that only general self-efficacy was predictive of PCT frequency, PCT reasons, and task aversiveness. Results suggest that among traditional age, academically disadvantaged college students, the belief that one may not be effective at mastering general life events seems to be reflective of college students who engage in frequent procrastinatory behavior.

Lennings (1994) administered a test battery assessing positive temporal attitude, future temporal extensions, generalized self-efficacy, locus of control, and career attitude to 160 high school students and 235 1st-yr undergraduates to test the hypothesis that temporal extensions and self-efficacy would be the most important predictors of career attitude. Contrary to predictions, the attitude Ss had toward the future was more important in predicting career attitude than was the degree to which Ss could imagine a proximal or extended future. For older Ss, this relationship was associated with a sense of internal control.

61 undergraduates (aged 18-48 yrs) who were employed in part-time jobs during the school year to clarify the relationships between social-cognitive constructs and career development concepts, such as vocational congruence, self-efficacy, and locus of control as predictors of career aspirations and development were assessed by Luzzo and Ward (1995). Ss completed the Career Decision-Making Self-Efficacy Scale and Career Locus of Control Scale. Results revealed that locus of control was a significant predictor of career aspiration-current occupation congruence among these college students, yet findings question the ability of the locus of control model to predict meaningfully vocational congruence. Analyses suggest that students with an internal career locus of control are more likely than those with an external career
locus of control to seek part-time jobs during college that are congruent with career interests.

The effects of attributional retraining on the career decision-making (CDMSE) of college students were examined by Luzzo et al. (1996). 60 college students (41 women and 19 men, aged 18-49 yrs), grouped according to their career locus of control, were differentially affected by a videotaped career intervention. The intervention was an attributional retraining procedure designed to persuade students to attribute low levels of confidence in making career decisions and career-related failures to a lack of effort. Results indicate that the CDMSE of students who initially exhibited an external career locus of control significantly increased after the attributional retraining procedure, whereas the students who initially exhibited an internal career locus of control demonstrated no significant increase in CDMSE after attributional retraining.

Career locus of control (CLC) and career decision-making self-efficacy (CDMSE) in relation to the level of congruence between career interests of 305 Black, Native American, Asian-American, and Caucasian 1st-yro college students aged 18-38 yrs and their current occupation were examined by Luzzo et al. (1997). Generally, Ss showed strong CDMSE and relatively internal CLC regardless of employment status, while those with high current occupation-career interest congruence showed significantly more of an internal CLC. The absence of any relationship between employment status and CDMSE suggests that a S's confidence in her or his ability to engage in effective career decision-making is not apparently greater among those who are employed in occupations congruent with their career interests. Thus, although Ss working in congruent occupations may have a more internal CLC, higher levels of academic performance, and greater career maturity, they cannot be assumed to have higher CDMSE.

Trusty and Lampe (1997) examined high school seniors' perceptions of parental involvement in their lives, seniors' perceptions of parents' control over their lives, and the conditional relationship of these to students' locus of control. Data were from 10,311 high school seniors who responded to the Second Follow-Up Student Survey (1992) of the National Education Longitudinal Study of 1988. Findings support the contention that parental involvement and parental control are conditional on one another in predicting adolescents' locus of control. From high-school seniors'
perspectives, parental control coupled with parental involvement was related to internal locus of control, whereas control without involvement was related to external locus of control. This study supports the contemporary view of adolescent independence in that security derived from parental involvement and control fosters adolescent self-regulation.

Which cognitive and personality aspects associated with academic performance facilitate the formation of university students' cognitive and personality profiles were studied by Girardi et al. (1999). Two cognitive variables (learning strategies and self-regulation strategies) and 3 personality variables (self-esteem, locus of control, and depression) were identified. 1,559 male and female Ss aged 16-48 yrs in different academic programs in Mexico were administered the Self-Esteem Scale, the Beck Depression Inventory, and Likert-type scales on learning strategies, self-regulation, and locus of control. The results indicate that Ss (1) used learning strategies poorly and had a low level of self-regulation (cognitive level) and (2) tended slightly towards internal locus of control and had a low level of depression and variable self-esteem (personality level).

The relationship of athletic identity, career self-efficacy, career locus of control, and various demographic variables to the career maturity of junior college student-athletes was examined by Kornspan and Etzel (2001). Among 259 junior college student-athletes (aged 18-25 yrs) representing a Mid-western junior college athletic conference completed the Career Maturity Inventory, Career Decision-Making Self-Efficacy Scale Short Form, Athletic Identity Measurement Scale, Career Development Locus of Control Scale, and a demographic information questionnaire. Results reveal that career locus of control and career self-efficacy were the most influential psychological variables in the prediction of career maturity of junior college student-athletes. Gender and age were the only two demographic variables to significantly contribute to the prediction of career maturity scores.

In the light of various individual variables including social self-efficacy, locus of control, loneliness, age, sex, and acculturating group membership, Leung (2001) aimed to examine the psychological adaptation of overseas and migrant students, and Anglo-Australian students. Participants were 382 students attending various universities in Melbourne, Australia. There were 189 Anglo-Australian students, 72
Southern-European second-generation migrant students, 33 Asian migrant students, 33 Chinese migrant students, and 55 Chinese overseas students. The results suggest that there were ethnic differences in loneliness, social self-efficacy, locus of control, and academic satisfaction. For nonmigrant students, a sense of control was important to their psychological and academic adaptation whereas for migrant/overseas students, supportive social relationships were important for their psychological and academic adaptation.

The effects of locus of control, learning and performance goal orientation were studied on self-regulation and academic achievement scores in a group of 176 (88 boys and 88 girls) by Gupta (2002). The subjects were the students of first year graduation course studying in various colleges of agra city. The median split of scores was used for a 2 (locus of control: Internal vs. external)x 2 (learning goal orientation: High vs. Low)x 2(performance goal orientation: High vs. Low) factorial design. Multidimentional Academic Locus of Control Scale, State Meta-cognitive Inventory and Learning and Performance Goal Orientation questionnaires were the tools. Mean academic achievement scores of the last two public examination results was the index of academic achievement performance. The significant main effect of locus of control, learning and performance goal orientation was found on self-regulation of the subjects. None of the interaction effect was found to be significant with self-regulation. Though locus of control was not found to affect significantly academic achievement scores, learning and performance goal orientation could cast significant difference. Locus of control in interaction with learning and performance goal orientation could significantly affect the academic performance.

SELF-EFFICACY AND ACADEMIC ACHIEVEMENT:

Forty-five boys and forty-five girls of the 5th, 8th, and 11th grades from a school for the academically gifted and an identical number from regular schools were asked to describe their use of 14 self-regulated learning strategies and to estimate their verbal and mathematical efficacy, (Zimmerman & Martinez-Pons, 1990). The groups of students from both schools included Whites, Blacks, Hispanics, and Asians. Students came from middle-class homes. Gifted students displayed significantly higher verbal efficacy, mathematical efficacy, and strategy use than regular students. In general, 11th-grade students surpassed 8th graders, who in turn surpassed 5th
The effects of motivational orientation, self-efficacy, and feedback on change in test anxiety over 4 wks of instruction was examined by Dykeman (1994). 84 graduate students were classified as either task-oriented or ego-oriented and as either high self-efficacy or low self-efficacy. Ss were randomly assigned to either a criterion-referenced or norm-referenced feedback condition. Results indicate main effects for self-efficacy and a 3-way interaction effect for motivational orientation, self-efficacy, and feedback condition. Task-oriented, high self-efficacy Ss receiving criterion-referenced feedback showed the least amount of test anxiety.

Williams (1994) investigated gender-related differences in the efficacy-expectation / performance discrepancies of high school students across 4 subject matter domains. 88 female and 43 male juniors and seniors completed American College Testing assessments in English, mathematics, reading, and science. Prior to each domain-specific test, Ss rated their perceived self-efficacy expectation for successful performance on that test. As anticipated, most Ss reporting greater efficacy expectation also tended to perform at higher levels, particularly in mathematics.

Maximizing success is an important factor in contemporary approaches to tertiary teaching (Lennings & Gow, 1997). Variables such as self-efficacy have been identified as playing a key role in the prediction of outcome on various tasks, and manipulations of self-efficacy are seen as important principles in the development of persistence in desirable behaviors. Data from a pilot study on 99 nursing students demonstrates that time perspective, specifically attitude and orientation to the future, augments the role that self-efficacy plays in student goal setting. A larger study, with 373 nursing students (aged 17-50 yrs), identifies the relationship between time perspective, self-efficacy and goal setting in predicting student performance. Measures of future orientation, generalized self-efficacy, and academic goal setting are used as predictors of actual success in a psychology course. In addition, the same variables were used to predict performance in a different academic course 8 month
later. Results confirm the proposition that time perspective is an important predictor of self-efficacy. However, the results did not confirm that self-efficacy acted to mediate time perspective as a predictor of either goal setting or achievement.

Pajares and Graham (1999) designed to determine the influence of various motivation variables on task-specific mathematics performance and to explore whether these variables change during the first year of middle school. Students' task-specific self-efficacy was the only motivation variable to predict performance and did so both at the start and end of the year. There were no differences in mathematics anxiety, self-concept, or self-efficacy for self-regulation between the start and the end of year, but, by the end of the year, students described mathematics as less valuable and reported lower effort and persistence. Gifted students had stronger mathematics self-concept beliefs, and they had more accurate and less overconfident self-efficacy beliefs than did regular education students.

Whether middle school students' writing self-efficacy beliefs make an independent contribution to the prediction of their writing competence and to explore grade level and gender differences in writing self-beliefs were determined by Pajares and Valiante (1999). 742 6th, 7th and 8th graders completed attitude measurement surveys and wrote essays. Writing self-efficacy was the only motivation constructs to predict writing competence in a model that included writing self-concept, writing apprehension, perceived value of writing, and self-efficacy for self-regulation, previous writing achievement, gender, and grade level. Girls were more competent writers than were boys, but there were no gender differences in writing self-efficacy beliefs. However, when Ss were asked whether they were better writers than their peers, girls expressed that they were better writers than were other boys or girls in their class or in their school to a greater degree than did the boys. These findings suggest that girls and boys may use a different metric when responding to traditional self-efficacy scales. Ss in Grade 6 reported higher self-efficacy and found writing more valuable than did their older peers, and Ss in Grade 7 reported lower writing self-beliefs than did Ss in Grades 6 or 8.

Cassidy and Eachus (2000) investigated the relationship between students' assessment of their own academic proficiency (Research Methods Proficiency RMP),
learning style, academic locus of control, academic self-efficacy and academic achievement. First and 2nd-yr undergraduate students' (aged 18-41 yrs) RMP was measured before and after completing modules in Research Methods. Ss also completed measures of approaches to learning, academic self-efficacy and academic locus of control. Results showed that perceived proficiency increased after completing the taught modules and perceived proficiency was positively correlated with academic performance. Level 1 Ss, taught under the recently modified programme, reported higher perceived proficiency than Level 2 Ss taught under the previous programme. Perceived proficiency was positively correlated with a strategic learning approach and negatively correlated with a surface learning approach and external locus of control beliefs. Academic achievement was also positively correlated with a strategic learning approach and negatively correlated with an apathetic learning approach.

Joo et al. (2000) tested effects of student motivation on performance in Web-based instruction (WBI) were examined. In particular, applicability of the self-efficacy theory to WBI contexts was tested. A total of 152 junior high school students in Seoul, Korea, participated in WBI during regular science classes. Participants completed motivational surveys before the onset of WBI and took the written and search tests at the end of WBI. Path analyses revealed that students' self-efficacy for self-regulated learning positively related to their academic self-efficacy, strategy use, and internet self-efficacy. Academic self-efficacy predicted students' performance on the written test that comprised problems on topics covered during the previous WBI sessions. Students' scores on the WBI search test were significantly and positively predicted by their self-efficacy in using the internet. More interesting, students' academic self-efficacy beliefs were not able to predict their search test performance, whereas students' Internet self-efficacy beliefs were not able to predict their written test performance.

Li and Cheung (2001) studied the relationship among achievement goal, social goal, self-efficacy, academic achievement, and academic help-seeking. Ss were 152 7th-graders in a middle school in Shenzhen, China. Ss were assessed with the Goal Oriented Scale including ego-approach goal, ego-avoidance goal, cooperation oriented goal, and social intimacy, the Self-Efficacy Scale including academic efficacy and social efficacy; the Academic Help Seeking Attitude Scale including
help seeking and cost; and the Academic Help Seeking Tendency Scale concerning various possibilities of help seeking. The relationship of academic achievement goal, social goal, self-efficacy, and academic achievement and academic help seeking were studied with a correlation analysis. The influences of academic goal, social goal, self-efficacy on the attitude, tendency, and behavior of academic help-seeking were studied with regression analysis. The results show (1) that ego-oriented goals could be divided into ego-approach goal and ego-avoidance goal that had different effect patterns on academic help-seeking; (2) that social goals had significant relationship with academic help-seeking; and (3) that Ss with low self-efficacy did not want to seek for help, supporting the vulnerability hypothesis.

The psychometric properties of the Spanish adaptation of the General Self-Efficacy Scale in 259 male and female university students in Spain were studied by Sanjuan et al. (2000). Data on sociodemographic variables and psychological variables were obtained by questionnaire. Rotter's Internal-External Locus of Control Scale, the Psychological Reactance Scale, the Scale of Perceived Competence, the Hardiness Scale, and the Coping Inventory for Stressful Situations were used. Validity, reliability, and normative data were determined. Preliminary results indicate the General Self-Efficacy Scale shows suitable reliability, considerable predictive value, and is judged to be useful for studies about performance, health, and emotional processes.

The aim of Pajares and Valiante's (2001) study was to determine whether gender differences in the writing motivation and achievement of middle school students (N = 497) are a function of gender-stereotypic beliefs rather than of gender. Girls reported stronger writing self-efficacy, writing self-concept, self-efficacy for self-regulation, value of writing, and task goals, and they received higher grades in language arts. Boys reported stronger performance-approach goals. All gender differences favoring girls in writing motivation and achievement were tendered nonsignificant when feminine orientation beliefs were controlled. Findings suggest that a feminine orientation is adaptive in the area of writing, whereas a masculine orientation is beneficial when escorted by a feminine orientation. Results are interpreted from the perspective of Bandura's (1986) social cognitive theory.
Kanchana (2002) compared different cultures with regard to psychological dimensions is a challenge to the researcher. While in the west autonomy and separateness are emphasized in eastern cultures relatedness and interdependence are sought. This could have their impact on the way individuals describe themselves and on their decision making. The extent to which parents and elders play a role in decision making is probably a lot greater in India than in the west, Phase I of the study was conducted in U.S.A and phase II in India (Chennai). The objectives were to compare American and Indian Undergraduate college students with regard to (i) self-concept, (ii) Career Decision Making Self-efficacy. The sample comprised of 195 American students and 155 Indian students in the age group of 17-24 yrs. The data obtained is analyzed using tests, Manova, Regression and Correlation.

SELF-REGULATION AND ACADEMIC ACHIEVEMENT:

The relation between achievement and self-regulated learning (SRL) is more complex than originally believed was studied by Ablard and Lipschultz (1998). In this study, 222 seventh-grade students (53% boys) described their use of SRL strategies and rated their achievement goals (mastery and performance). Students were high achievers, performing at or above the 97th percentile on an achievement test. However, they ranged widely in their use of SRL strategies, suggesting that SRL strategies are not necessary for high achievement. Reasons for variation in SRL were examined. Advanced reasoning was not related to SRL. Performance goal orientation was related to SRL only in conjunction with mastery goal orientation. Mastery goal orientation and gender were significantly related to SRL. As mastery goals increased, so did the use of SRL strategies. Girls reported greater use of SRL strategies (a) involving personal regulation or optimizing the environment and (b) when completing difficult homework or engaged in reading and writing.

Academic delay of gratification (ADOG) refers to students' postponement of immediately available opportunities to satisfy impulses in favor of pursuing chosen important academic rewards or goals that are temporally remote but ostensibly more valuable. In Study 1, the authors developed a course-specific academic delay of gratification scale (ADOGS) with acceptable psychometric properties. Results of Study 2, in which 369 college students (aged 17-44 yrs) participated, support the hypothesized association between ADOG and students' self-regulated learning, which

53

Fulk et al. (1998) investigated the motivational characteristics of 3 groups of adolescents: students with learning disabilities (LDs), students with emotional or behavioral disorders (EBDs), and students with average achievement (AA). Three questionnaires, the Motivation Orientation Scale, the Purposes of School Scale, and the Motivated Strategies for Learning Questionnaire were administered to junior high and middle school students with LDs and EBDs, and to an age-matched group of students with AA. These self-report measures were administered to students in small groups in one session of approximately 35 to 40 min. Significant differences on the Motivation Orientation Scale were detected among the groups. Differences on the Purposes of School Scale approached but did not reach significance. Students with LDs appeared to be more alienated and oriented to avoiding work than students with AA or students with EBDs. Students with EBDs reported significantly more feelings of test anxiety than did students with LDs or AA. Gender differences emerged, with females reporting more support for self-sacrifice, community spirit, and persistence, whereas male students reported more feelings of alienation.

Kadhiravan and Balasubramanian (1998) examined the relation between self-regulated learning and right, left and integrated brain dominance. The frequency of self-regulated learning strategies, cerebral dominance, and gender differences were measured in a group of 94 10th grade students. The self-regulated learning scale and the style of learning and thinking tool were administered to the Ss. Male and female Ss did not differ in their use of self-regulated learning strategies except in self-evaluation and goal setting and planning. Gender differences did not exist in the hemisphericity of the Ss.

Lopez et al. (1998) researched on the self-regulatory implications of psychological control suggests that overestimations of one's capabilities may be associated with enhanced performance. This hypothesis was examined in a 2-yr (3-occasion) longitudinal study of 381 8-11 yr old German school children. Controlling for gender, grade in school, prior academic achievement, and level of intelligence, the authors used path analysis to examine longitudinal relations between overestimations
of one's personal agency and subsequent school performance. It was expected that
overestimations of one's agency would facilitate subsequent school performance and
that this relationship would be strongest for those with moderate overestimations of
their agency. Supporting the 1st hypothesis, overestimations of one's capabilities were
consistently associated with improvements in subsequent school performance.

The development of self-regulation in school-aged children's help-seeking
behavior was studied in a Vygotskian framework. It was hypothesized that studying
pupils of two different ages would make it possible to define two levels reached by
the children in their capacity to take charge of their help-seeking behavior. When
placed in a problem-solving situation, children (80 2nd-graders and 87 4th-graders)
had the opportunity to seek help from the experimenter, if needed. Three self-
regulation aspects were evaluated: (1) awareness of the need for help, (2) capacity to
restrict questions to what is necessary, and (3) ability to re-use received help in
analogous tasks. The results showed that the level of self-regulation depended on both
age and academic achievement; only high-achieving 4th-graders exhibited advanced

Strage (1998) examined perceptions of parental practices and values
associated with academic self-regulation in college students. 465 students completed
the 104-item Student Attitudes and Perceptions Survey, which consists of 4 personal
profile scales, 7 family background scales, 2 course characteristics scales, and 2 study
habits scales. Perceptions of parents as authoritative and of family as emotionally
close were found to be predictive of (1) general confidence and positive sense of self,
(2) positive goal-orientation at school, (3) general concern about preparation for the
future, and (4) positive adjustment to college. These family profiles were also
predictive of (1) students' rating their introductory psychology course as interesting
and supportive, (2) favorable ratings of their time and effort management and note-
taking skills, and (3) strong agreement with a series of items reflecting components of
self-regulated learning. Perceptions of parents as authoritarian and of family as
nagging or enmeshed were also predictive of concern about preparation for the future.
These family profiles were generally predictive of students' rating their introductory
psychology course as difficult, and of time and effort management difficulties.
The main aims of Vermunt's (1998) study were increasing integration of existing models of student learning; gaining understanding of the regulation of constructive learning processes; and investigating the degree to which these phenomena generalize across contexts. 717 students from an open university and 795 students from a regular university participated. Based on phenomenographic studies a diagnostic instrument was constructed that covered 4 learning components: cognitive processing, metacognitive regulation, mental learning models, and learning orientations. Four learning dimensions were consistently found: an undirected, reproduction-directed, meaning-directed, and application-directed style. These styles consisted of typical combinations of learning components. Moreover, students' use of constructive processing strategies was explained much better by self-regulation of learning than by external regulation.

Relations among autonomy, self-referenced beliefs, and self-regulated learning for 356 Japanese elementary school children (ages 10-12 yrs) from Grades 5 and 6 was investigated by Yamauchi and Tanaka (1998). Ss completed an autonomy scale, a self-reference beliefs scale, and a self-regulated learning scale as part of 2 self-report questionnaires. The measures assessed 4 types of motivation; self-esteem; strategy, capacity, and control beliefs; values; 4 types of goal orientations; and 3 types of learning strategies. Four types of motivation were shown to conform to a simplex structure or ordered correlational structure. Correlations among scores on autonomy (4 kinds of regulation) and on self-regulated learning, and between scores on self-referenced beliefs and on self-regulated learning were examined. Finally, canonical correlation was used to investigate the relations between autonomy and learning and between beliefs and learning. Results suggest that as motivational types change from external to intrinsic regulation, the self-regulated learning process becomes more closely related to better self-regulated learning. Also, motivational components of adaptive learning modes are more controlled types of motivation and beliefs about ability are directly related to the success or failure of Ss' performance.

Middle school students with and without learning disabilities (LD) were taught a strategy for planning and writing expository essays, using the Self-Regulated Strategy Development approach to instruction by De La Paz (1999). Instructional procedures helped students to consider fully their topic in advance of composing and
to use text structure knowledge to develop 5-paragraph essays. Ss were 22 7th and 8th graders who were identified as LD, low, average, or high achieving. Students were instructed in procedures that encouraged planning throughout the composing process, as they set both process and content goals for writing. Regular education teachers provided instruction to all students in inclusive classrooms, and the effects of the instructional program were assessed using a multiple baseline with multiple probes in baseline design. Positive results were found for students with LD and low-, average-, and high-achieving writers: Students' papers became longer, more complete, and improved in quality. Changes in both writing performance and behavior were maintained over time.

292 college freshmen were assessed on self-referenced cognitions and feelings. Three month later, regulatory study activities were measured by self-report (Minnaert, 1999). The canonical correlation between self-referenced cognitions and feelings and regulatory activities was very substantial (.52), and even invariant of ability differences. Task value and the tendency to achieve success were positively related to self-regulation for both males and females. An impressive gender difference was noticed, however, for the tendency to avoid failure. For female students, a high level of fear of failure acted as a detrimental agent upon regulatory activities.

Confirmatory factor analysis was used by Rao and Sachs (1999) to evaluate the factor structure of a Chinese version of Pintrich and De Groot's Motivated Strategies for Learning Questionnaire (MSLQ). The questionnaire was examined for the appropriateness for describing motivational beliefs and self-regulated learning strategy. Data were gathered from a sample of 477 junior high and High school students, ranging in age from 12-19 yrs, in Hong Kong. The authors suspected that the Cognitive Strategy Use scale and the Self-Regulation scale may combine to form one factor on the MSLQ--Chinese form. Results indicated that a modified five-factor model had a better overall fit to the data than the five-factor model reported by Pintrich and De Groot in a sample of junior high school students in the US.

A dynamic model of achievement is described by Schunk, (1999) in which social influences are internalized and used self-regulatively by learners. The conceptual focus is social cognitive theory with emphasis on triadic reciprocity and

57
phases of self-regulatory development. Social (instructional) factors, self (personal) influences, and achievement outcomes (behaviors) reciprocally interact during learning; the direction and strength of reciprocal influence will vary due to level of skill acquisition and phase of self-regulatory development. Research is summarized on social modeling, self-verbalization, and goals with progress feedback; each involves social transmittal of skills and strategies and a means for learner internalization. The social cognitive perspective is contrasted with other theoretical views that highlight the role of the social environment in learning.

Thiede (1999) examined the relation among metacognitive monitoring, self-regulation and test performance variables in a multitrial learning task using 120 university students. Regression analyses showed that monitoring accuracy and self-regulation were reliably related to test performance—greater monitoring accuracy and more effective self-regulation were associated with greater test performance.

According to Thiede and Dunlosky (1999) people of all ages are more likely to choose to restudy items (or allocate more study time to items) that are perceived as more difficult to learn than as less difficult to learn. Existing models of self-regulated study adequately account for this inverse relation between perceived difficulty of learning and these two measures of self-regulated study (item selection and self-paced study). However, these models cannot account for positive relations between perceived difficulty of learning and item selection, which are demonstrated in the present investigation. Namely, in Experiments 1 and 2, the authors described conditions in which people more often selected to study items judged as less difficult than as more difficult to learn. This positive relation was not demonstrated for self-paced study, which was always negatively correlated with judged difficulty to learn. In Experiments 3 through 6, the authors explored explanations for this dissociation between item selection and self-paced study. Discussion focuses on a general model of self-regulated study that includes planning, discrepancy reduction, and working-memory constraints.

The relation between students' (aged 14-16 yrs) tendency to self-regulate their level of motivation and other aspects of their self-regulated learning and achievement were studied by Wolters (1999). Ninth- and tenth-grade students (N = 88) responded
to survey items designed to assess five motivational regulation strategies. An exploratory factor analysis of these items reveals distinct, internally consistent scales reflecting the strategies of Self-consequating, Environmental Control, Performance Self-Talk, Mastery Self-Talk, and Interest Enhancement. Self-report measures of effort, use of six cognitive and metacognitive learning strategies, and teacher-reported grades were also collected. Findings reveal mean level differences in students' reported use of the motivational strategies. In addition, results from a series of multivariate regressions indicate that students' use of motivational regulation strategies could be used to predict their use of learning strategies, effort, and classroom performance. As a whole, findings support the belief that motivational self-regulation should be integrated more completely into current models of volition and self-regulated learning.

Relations among measures of perceived control, autonomy, and self-regulated learning strategies for 228 junior high school (90 in Grade 7 and 138 in Grade 8) and 306 senior high school (184 in Grade 11 and 122 in Grade 12) students were investigated by Yamauchi et al. (1999). Participants completed 3 self-report questionnaires designed to measure control beliefs, strategy beliefs, capacity beliefs, 7 types of motivation, and two types of self-regulated strategies. Confirmatory factor analysis identified the structure of perceived control Significant "grade" differences were obtained in several measures. Canonical correlation was used to investigate the relations between perceived control and autonomy measures. Finally, multiple regression analysis was used to investigate the relations between perceived control and self-regulated learning strategies and between autonomy and self-regulated learning strategies.

Ss taking a college introductory organic chemistry course completed measures assessing perceptions of autonomy support, learning climate, competence, interest and enjoyment, anxiety, and performance goals. Results obtained by Blackard Deci (2000) revealed that: (1) Ss' reports of entering the course for relatively autonomous (vs controlled) reasons predicted higher perceived competence and interest/enjoyment and lower anxiety and grade-focused performance goals during the course, and were related to whether or not the Ss dropped the course; and (2) Ss' perceptions of their instructors' autonomy support predicted increases in autonomous self-regulation,
perceived competence, and interest/enjoyment, and decreases in anxiety over the semester. The change in autonomous self-regulation in turn predicted Ss' performance in the course. Further, instructor autonomy support also predicted course performance directly. It is concluded that shifts in teaching approaches toward providing more support for students' autonomy and active learning may hold promise for enhancing achievement and psychological development.

Forzi and Not (2000) tested a hypothesis concerning self-esteem and assessed the relationship between motivational orientation and the domains of competence-adequacy and global self-worth. 230 male and female school-age children and adolescents in 3rd grade, 5th grade, and junior high school in Italy were administered the Self-Perception Profile for Children and the Self-Regulation Questionnaire. Factor analysis with oblique and varimax rotation, correlation and cluster analyses, a series of ANOVAs, and LISREL 7 analysis were performed. The results confirm the high level of variance shared by adequacy of physical appearance and global self-worth and thus confirm hypothesis. The findings also reveal a strong relationship between perceived scholastic competence and intrinsic motivational orientation.

Liu and Chen (2000) studied how learning task requirements and time pressure influence on-line self-regulated learning (SRL) activities. 57 sophomores of Beijing Normal University, Beijing, China, were assigned into 4 experimental groups to complete 2 learning tasks requiring browsing or mastering under or without time pressure on multimedia computers. The influential factors of SRL activities were studied with stepwise regression analysis. The results show significant differences of SRL activities in different learning task requirements, time pressure influence, and the mediation of the subjective goal.

McManus (2000) examined the learning of self-regulated learners when using the web-based learning environment strategies of nonlinearity and advance organizers. 119 students (aged 20-45 yrs) attending a college introductory computer course were categorized as high, medium, or low self-regulated learners based on scores of the Motivated Strategies for Learning Questionnaire. Other collected data included prior computer knowledge and computer anxiety. Independent variables were the degree of instructional presentation nonlinearity and presence or absence of
advance organizers, with learner achievement the dependent variable. Results show no significant main effects or interactions, but the 2 nearly significant interactions between nonlinearity and self-regulated learning, and between nonlinearity and advance organizers. Findings strongly suggest that highly self-regulating learners learn poorly in mostly linear web-based hypermedia learning environments, where they have very few choices, while medium self-regulating learners learn poorly in highly nonlinear environments in which they are given too many choices. Advance organizers are more effective in highly nonlinear web-based hypermedia learning environments than in mostly linear environments.

Tanaka and Yamauchi (2000) examined the effects of motivational styles differing in the degree of autonomy on perceived control beliefs and self-regulated learning of English by 121 Japanese undergraduate students. Cluster analysis showed 4 groups of students, which differed in degree of autonomy. When scores on perceived control beliefs and self-regulated learning were compared, Cluster 1 and Cluster 4 showed a contrast; typically adaptive learners versus maladaptive learners. Clusters 2 and 3 seemed to stand between these 2 clusters. The results of structural equation modeling, which was conducted to examine the effects of autonomy on English learning processes, confirmed that intrinsic motivation and identified regulation positively affected students' academic performances through adaptive self-regulated learning.

Verma (2000) studied the cognitive and regulation strategies of learning among distance learners. The investigation was undertaken to explore the differences in cognitive strategies and regulation strategies of learning of male and female distance learners with high and low level of academic contents. The sample comprised of 108 distance learners selected through random cluster technique. The results of the study indicated that male and female students differ significantly in regard to deep processing, male being more prone toward it, male and female distance learners did not exhibit any significant difference in their mean score of 'self-regulation', 'external regulation' and 'lack of regulation' strategies.

Martin, et al. (2001) find that both self-handicapping and defensive expectations are negatively associated with self-regulation and persistence, whereas
reflectivity is positively associated with these outcomes. Students high in self-handicapping received lower end-of-year grades than did students low in self-handicapping and were less likely to be in attendance 1 year later.

Rudolph, et al. (2001) examined the role of maladaptive self-regulatory beliefs as vulnerability factors for academic and emotional difficulties during the transition to middle school. A short-term longitudinal design was employed to follow 2 groups of early adolescents: 187 adolescents who experienced a school transition between the fifth and sixth grades, and 142 adolescents who did not experience a school transition between the fifth and sixth grades. Consistent with the proposed model of self-regulation, maladaptive self-regulatory beliefs predicted individual differences in perceived school-related stress and depressive symptoms over the course of the middle school transition, but were not associated with academic and emotional difficulties in adolescents who remained in a stable school environment.

The relations between 198 college students' control beliefs and future time perspective (FTP) and their academic achievement and studying using canonical correlation. Shell and Husman (2001) identified two statistically significant canonical correlations: One associated primarily competency belief, as reflected by self-efficacy, and FTP connectedness with grades; The other associated primarily contingency beliefs, as reflected by locus of control and causal attributions, and FTP connectedness and valence with studying. Results support a distinction between competency and contingency in personal control beliefs and suggest that these have somewhat different motivational consequences. Results also indicate that future time perspective beliefs play a role in motivating achievement and studying.

Sinha and Gupta (2001) attempted to examine the relationship of self-efficacy, learning and performance goal orientation and self-regulation among a sample of 150 undergraduates of Agra City. Self-efficacy scale by Jerusalem and Schwarzer, learning and performance goal orientation scale by Sinha and Kunari (2000) and self-regulation scale by O’Neil and Abedi were used as tools. Zero order correlation coefficients among the study variables showed positive correlation coefficients leading to the conclusion that there is a significant increase in self-regulation with the increase in the levels of self-efficacy, learning and performance goal orientation.
Multiple regression analysis was also done to see the relative contribution of the predictor variables (e.g. self-efficacy, learning and performance goal orientation) the results were discussed on the basis of Bandura's theory of self-efficacy and Kanfer's theory of intrinsic motivation.

Gupta and Sinha (2002) studied the effect of learning and performance goal orientation and locus of control were examined on self-regulation among a sample of 300 undergraduates of Agra City, who had a sound understanding of english language, age ranging from 17 to 20 years. a 2 (locus of control: Internal vs. external)x 2 (learning goal orientation: High vs. Low)x 2(performance goal orientation: High vs. Low) factorial design. Multidimensional Academic Locus of Control Scale, State Meta-cognitive Inventory and Learning and Performance Goal Orientation questionnaires were the tools. The three way analysis of variance revealed the significant main effect of locus of control, learning and performance goal orientation on self-regulation of the subjects. None of the interaction effect was found to be significant on self-regulation.

The review of related literature shows that academic achievement concerns a wide scope in the present day scenario. It is not only influenced by single factor but there is a wide range of factors which are crucial in its determination. Self-regulation including cognitive as well as metacognitive strategies and goal orientation play a dominant role. Studies related with self-regulation show that it is the ability of an individual to exert influence over his/her behavior. Self-efficacy levels can enhance or impede motivation to achieve. Thus it seemed worthwhile to undertake research study to see the relationship of goal orientation, locus of control, self-efficacy and academic achievement. The review revealed that this area is least explored in Indian conditions and promise a fruitful enquiry. It is to be pointed out that most of studies cited above had children as subjects and only a few studies have been conducted on adolescents sample. Although locus of control is a well studied area, still there is a dearth of studies with academic locus of control which is thought to be specifically related with academic achievement of the students.