CHAPTER III

METHODOLOGY
3.1 Problem Statement:

Identity styles of school going adolescents influence their cognitive and affective functioning.

3.2 Assumptions:

1st Assumption: It was assumed that identity style, cognitive and affective functioning of adolescents may vary in the three types of school (Municipality run Government School, Kendriya Vidyalaya and Public School).

Adolescence is the stage where the individual's most crucial task is to construct a clear sense of self-identity, a coherent identity structure that provides a subjective sense of inner unity and a feeling of integrative continuity over time. Berzonsky (1989) agreeing with Epstein (1973) said that self identity could be conceptualised as a self generated theory about the self, i.e. a theory formulated by individuals about themselves as they coped and adopted to their day-to-day activities. As one interacted in their daily life, self relevant information and problems were encountered which were then handled by using the schemas, strategies and constructs of the self theory. However, since individuals live in the social and physical context, these too play a significant mediating role in how individuals define their self-identity. Berzonsky (1989) who offered the process orientation in identity said that orientations that are manifested by individuals when involved in personal decision making and problem solving comprised of self-relevant information and experiences, which were encoded, processed, organised and revised. However, there may be variations in the orientation from individual to individual depending upon one's stylistic preferences and/or demands and incentives of one's environment (i.e. mostly, home and school environment in the case of adolescents). For example, if a particular school environment encouraged its adolescents to exhibit a normative orientation when making a decision with regard to matters of importance to them (i.e.
adolescents) they will by and large prefer to adopt that orientation and gradually it may become their preferred style of functioning as well. Similarly, if the significant members of the adolescents environment encouraged and provided incentives when they adapted an avoidant/diffuse style to solve problems or make a decision with regard to issues that were related to their self identity, then in the gradual process these adolescents would prefer to use the avoidant/diffuse style than any other styles of functioning.

Schools are social institutions to which most adolescents, particularly urban, are exposed. However, they do not enter a particular school voluntarily, but are there because of the choice of the significant members of their family, who view the school as sharing and endorsing their (family’s) values and norms and inculcate them in the adolescents. In other words, schools are an extension of the adolescents' family and often uphold similar norms, values, standards and ethos. Furthermore, school is also an organisation in which the views of the apex managing body, headmaster/mistress and the staff prevails and hence a particular school type may project a specific philosophy while setting it's goals and deciding the methods of achieving them. This set pattern of functioning within the school boundary and the values, standards and philosophy that a particular school type upholds may mediate in the adolescents' process orientation of self relevant information of self identity and approaches adapted in personal decision making and problem solving.

Besides, the significant members in a specific type of school environment (headmaster/mistress, teachers and peers) also tend to come from the same social class background as that of the adolescents, bringing along with them specific ethos, standards and styles of functioning, which probably then becomes a guiding factor for the individuals in determining how they desire to define their own self theory and the mechanisms they adopt to process self relevant information's in decision making and problem solving. For instance, in the case of Public School (a school type to which mostly the upper and
affluent social class members sent their children and also where the teachers and staff came from the same social background), may exhibit a set pattern of functioning, values and standards which influenced its adolescents to act accordingly when processing various information's. This could be very much different in the case of adolescents attending the Municipality run Government School only because in this school type the values, standards, ethos and norms as well as the style of functioning exhibited were different (i.e. catered mostly to the lower socio-economic class) and thus encouraged the adolescents in this school type to define themselves and function accordingly. Therefore it was assumed that identity styles of school going adolescents might vary in the three types of school (Municipality run Government School, Kendriya Vidyalaya and Public School).

Besides the development of identity and styles of processing self-relevant information, adolescence is also marked by development in cognitive and affective functioning. The ability to learn, think and make use of knowledge reaches its peak during adolescence. Cognitive planning which involves the ability to think and conceptualise activities to solve problems in hand, is a reflection of individual's cognitive functioning. Planning relies on representation in the environment, anticipation of solutions to problems and monitoring of strategies to supervise whether they meet the problem and solve it. But planning also involves people as co-planners, resources one may draw upon, or as pieces to be moved on ones planning board. Planning also has many barriers; some of that are created by the individuals themselves while some are imposed by social constraints on what is feasible or proper. For example, a particular social environment may prefer its individual to plan their daily chores while another may not. Accordingly then the members of a society mould their planning strategies where it is regarded as desirable and where a less desirable mode of action is required.

Children and adolescents often draw together and are influenced by each others plans (Cocking and Copple, 1987). They also learn to
plan from their significant others (parents and teachers, mostly). Goodnow (1987) had said that most of our plans are learned from more capable planners. Besides being a socially mediated process—though cognitive in nature—the adolescents also learn to make plans as per the social expectations. Goodnow (1987) had also said that when planning involves people, which invariably it does at some point, one is required to learn the social rules, regulations, standards and ethos that are the guidelines of such people's behaviour.

Academic performance which has been known to be much influenced by various factors as parents, peers, social class as well as within school environment (teacher expectancies, student-teacher interaction, homework etc.) also may vary from one school type to another. This is because in every type of school different expectations, aspirations and incentives are provided which probably causes the difference in the adolescent's performance in academics. Therefore, the three types of school which represented three different social environments with probably different norms and standards may also lead to show variance in the cognitive functioning of the adolescents attending these types of school.

Affective functioning which involves variables as self esteem, life satisfaction and positive and negative affect is also crucial during the adolescence. Together they have much impact on the subjective well-being of the adolescents, which then proceed to influence their functioning in other areas of development (such as cognitive, personality etc.). Self esteem i.e. one's pride in oneself and belief of her/his ability and self worth is a very important aspect and catalyst in adolescent development. However there are various factors which have been found to influence on self esteem, such as parental influence, child rearing techniques, social class to which the individual belongs etc. These factors further enhance the positive or negative worth that an individual feels about oneself. Similarly, life satisfaction (personal and social) as an individual feels and so also her/his positive and negative affect are important indicators of the adolescents affective
functioning and the social environment (of which the school is a prominent one) plays a significant role in defining and shaping these functions in the adolescents. Studies have found that school type and social and cognitive competence of the adolescents are strongly associated with each other (Nanda and Dash, 1996; Hariharan et al., 1987). It may also, therefore, be possible that the affective functioning of adolescents may vary with their attending different types of school.

Therefore, it was assumed that identity styles, cognitive and affective functioning of school going adolescents might vary in the three types of school (Municipality run Government School, Kendriya Vidyalaya and Public school).

2nd Assumption: It was assumed that ninth and eleventh grade adolescents may vary on their identity style, cognitive and affective functioning.

Identity style of an individual is understood from the approach she/he adapts in processing information relevant for personal decision making and problem solving. Berzonsky (1988) had proposed that the process by which personal decisions are made and problems are solved may vary from individual to individual. There may be various factors that cause such a variance of which level of education or grade in which the adolescent is presently studying may be an important factor. This is because the grade or level of education indicates a certain level of cognitive maturity that is required to handle various tasks at that level. Therefore, it may be possible that an adolescent of a lower grade may according to her/his cognitive ability (i.e. the ability to grasp the demands of a situation, think, probe, process and make strategies) approach the problem in hand and adopt a relevant (to her/him) style of functioning while solving the problem or taking a decision. This style may be different from the one adopted by an adolescent of a higher grade. This is because of cognitive maturity by which the adolescent, in a higher grade becomes more capable of dealing with problems in a different and probably a better way. Furthermore, researches have
shown that age as well as grade (level of education) has been significant covariates in the progressive strengthening of identity in adolescents as they transit from early to late adolescence and finally adulthood. Berzonsky (1988, 1989) had said that the four outcomes as classified by Marcia (1966) may reflect or be associated with differences in process by which an individual takes decisions and solves problems. Therefore, he believed that Marcia's achievement and moratorium oriented identity status individuals may adopt an information orientation in processing relevant information. Similarly, individuals with foreclosed status relied on normative orientation in processing information by showing more concern in confirming with the prescribed standards and norms held by the significant others, while the diffused status individuals revealed a lack of commitment, delay and procrastination, thus relying on diffuse/avoidant orientation process. However, it is more relevant to note here that studies have shown that adolescents of age twelve to eighteen years and grade six to twelve revealed significant differences in their identity status. Younger adolescents were mostly in the foreclosure status while older adolescents were mostly in achievement status (Archer, 1981 and Meilman, 1979). Having already observed the close relation between identity status and style, it could be said that younger adolescents (as per the results of the aforementioned research) were mostly Normative oriented, while their elder counterparts were Informative oriented in their style of functioning. Thus, it was assumed that ninth and eleventh grade adolescents may differ in their identity style orientation.

Besides identity styles, ninth and eleventh grade adolescents may also vary in their cognitive functioning. This is because educational level (grade) of an individual exposes one to many novel problem solving strategies, unknown to the individual before. These strategies may get incorporated into her/his cognitive structure through the classroom curriculum and social interactions. Observation and participation by adolescents in their interpersonal relations as well as social activities extend to them various new skills, as they grow up from year to year.
Cognitive competence, may thus be influenced by the level (grade) of education of the adolescent, since with experience and higher grades (level of education) the ability to make effective use of available cognitive skills increases (Das et al., 1996). Pea and Hawkins (1987) found that the older children were more efficient in their planning of classroom activities than their younger counterparts. Although neuropsychological studies have indicated that by age of ten years children acquired mastery over verbal and non-verbal skills (Beckar et al., 1987, Passler et al., 1985), yet it took few more years before the individuals gained efficiency in using these skills, in terms of speed and fluency. Therefore, by the time children reached their late adolescence, they not only became capable of making effective plans but also could choose out of several possible plans (Das et al., 1996). Thus, it may be assumed that ninth and eleventh grade adolescents may vary in their cognitive functioning.

It has been noted that there is a great fascination among adolescents for probing into their own internal state, whether cognitive or emotional, which contributes to their identity development and consolidation as well as their affective functioning (Erikson, 1968). Researches have shown that with age the interpersonal relations and social interactions of adolescents change (Newman, 1976). The focus of interactions in late adolescence may vary significantly from early adolescence, so also the view about one's own emotions. Hausell et al. (1986) found that adolescents of eighteen years were more introspective than fifteen and thirteen year old adolescents. This suggested that the general understanding of their affective states improved with age as well as grade (level of education).

Hence, it was assumed that identity style, cognitive and affective functioning may differ between the school going adolescents of the ninth and eleventh grades.

3\textsuperscript{rd} Assumption: It was assumed that female and male adolescents may differ in their identity styles, cognitive and affective functioning.
Erikson (1968) had suggested that in identity development of females and males there are more important issues than occupation, religion and politics. He maintained that “womanhood” arrives when attractiveness and experience have succeeded in selecting what is to be admitted in order to welcome the “inner space”. Males, on the other hand are seen as projecting themselves into the “outer space” to become accomplished in the “conquest of geographic space and scientific fields or in the dissemination of ideas”. Various studies by Marcia (1966, 1967) Waterman (1972), Josselson (1972), Schenkel (1973) and others have revealed that identity styles of males differed from those of the females. Males have been found to focus on occupational issues while females focus on interpersonal and sexual issues (Alishio and Schilling, 1984). Sharma and Anand Lakshmy (1993) observed that in the Indian context, girls often emerged as “unassertive, responsible and compliant” of parental values and expectations, which they internalise as their own. On the contrary, boys were more assertive, having greater freedom to defy parental values and expectations and develop and accomplish their self defined activities. Thus, while female adolescents tend to develop a foreclosure identity status that leads to normative identity style, their male counterparts tend to be in the moratorium status that leads to either informative identity style or diffuse/avoidant identity style.

Cognitive functioning of female and male adolescents may also vary. Goodnow (1987) had said that most of our plans are learned from more capable planners. This capable planners are mostly the significant others of the adolescents social environment, such as parents, teachers, peers etc. Imitating them (significant others) the adolescents tend to redo the same/similar strategies while planning their actions for same/similar situations through which the significant others have also gone through. But, the process they (adolescents) adopt in planning and performing cognitive functions may differ between female and male adolescents. This is because females (girls) are generally expected and socialised to be more nurturant, caring,
dependent, compliant, expressive and cooperative. In contrast to this males (boys) are expected to be competitive, independent, assertive, achievement oriented, instrumental and sometimes aggressive also (Chowdhary and Chaudhary, 1996). Thus, their process of planning which also gets reflected in their performance of cognitive functions may be influenced or guided by the social expectations and aspirations. For instance, a female adolescent may plan as well as perform cognitive functions (such as planning day-to-day activities, performing in academics etc.) in such away that they match with what the society expects from her. Thus, her nurturant, caring, compliant, dependent nature will be reflected in her cognitive functioning. Similar is the case with the male adolescents. Therefore, it was assumed that female and male adolescents may vary in their cognitive functioning.

Social expectations and aspirations being different for female and male adolescents, it is undoubtedly true that their socialisation process also differs. This may cause a difference in their affective functioning, which gets reflected in their self esteem, life satisfaction (personal and social) as well as positive and negative affect. Josephs et al (1992) had observed in a study that in females self esteem was linked to a process in which connections, attachments, interdependence etc. was the guiding factor, while for males self esteem was linked to individuation process and personal distinguishing achievements. Related to this also is the individual’s satisfaction with her/his personal and social life and positive and negative affect. In others words, when an individual has high self esteem, she/he also may be more satisfied with her/his life and have high positive and low negative affect, because she/he is able to perform and achieve her/his desired goals. And since, the underlying factors of social behaviour and expectations are different in the case of females and males it was assumed that their affective functioning may also differ.

4th Assumption: It was assumed that identity styles may have significant correlation with cognitive and affective functioning of male
and female adolescents, studying in ninth and eleventh grade across the three types of school.

The school is one social institution to which virtually all adolescents are exposed. It is in this environment that an individual develops and consolidates her/his values, standards, norms etc. which become the guiding factor in her/his identity style, cognitive affective and behavioural functioning. The school serves two primary functions, namely maintenance-actualisation and skills training/ cultural transmission (Ausubel et al., 1977). These functions are individual oriented and community oriented respectively. While in the former, the school aims in giving the student an opportunity to grow socially and emotionally, in the later (skills training/ cultural transmission) the school aims at providing the individual with the skills and knowledge necessary to become economically independent and a productive member of the society. The former helps in enhancing an individual’s self esteem and maturity in processing self-relevant information in defining one’s own self identity. The later ensures that the individual becomes capable of functioning optimally within her/his social system. However, irrespective of what type of school the adolescent attends, it is sure that school environment plays a significant role in defining one’s self identity, particularly during the adolescent years. However, identity formation and consolidation do not occur in isolation. While the individual gains more and more efficiency in deciding the approach to be adopted in processing information required for making decisions and solving problems related to issues that are relevant for her/his identity, other developments such as cognitive, affective etc. also continue taking place in the adolescent. Therefore, it is possible that these interact with each other, rather go hand in hand with each other. For example, an adolescent with preferred orientation for normative identity style may develop a particular cognitive and affective functioning which may differ from the adolescent who has revealed a preference for informative oriented identity style. The former adolescents cognitive and affective functioning may reveal the aspirations and expectations of
significant others and will probably also be in terms with the society’s norms, standards, values, ethos etc. The later adolescent (i.e. the one who has indicated a preference for informative identity style) will probably reveal in her/his cognitive and affective functioning an exploratory nature, actively seeking, processing and evaluating all such information that are relevant to her/his identity and then guiding her/his emotions, cognitions and behaviour. Therefore, identity styles of the adolescents may be related to their cognitive and affective functioning. However, it is also an important factor to take into cognisance the type of school which the adolescent attends, for, every school type endorses its own style of functioning by setting examples within the school environment, providing incentives and encouraging and appreciating certain styles of identity as well as cognitive and affective functioning. Therefore, it will be interesting to study the pattern of relationship between identity style and cognitive and affective functioning of adolescents attending the three types of school (Municipality run Government School, Kendriya Vidyalaya and Public School).

Erikson’s eight stages of psychosocial development had suggested that development is dynamic in nature and involves the resolution of specific tools which occur in an epigenetic fashion. Each stage covers about comes about because of a new dimension of social interaction which becomes possible with increased physical, psychological and cognitive maturity. Therefore, when the adolescents progressed from the fourth stage (Industry/Inferiority) wherein the development had been learning of skills in interaction with environment, particularly in school, to the fifth stage (Identity/Role confusion), they had entered it with increased physical, cognitive and behavioural maturity. In adolescent years the main task being resolution of identity crisis, the increased level of physical, cognitive and behavioural maturity of the adolescents assists them in making this crisis more pronounced. However, the same maturity also helps them to resolve the various crisis and form a identity of their own.
Furthermore, physical, cognitive and affective development assists the adolescent to become aware of various issues which they realise are of importance for their identity. For instance, with age and grade (level of education) the cognitive maturity increases which then enhances the adolescents’ ability for hypothetical and abstract thinking, reasoning, planning etc. This opens the door of knowledge for them to areas of which they were not aware before, thus leading to questions, confusion, crisis, searching for solution and finally resolution. Similarly, due to increased sensitivity and perpectivity in adolescent years, one’s self image, both in one’s personal view and that of others (significant) come to hold much importance, which has its impact on the adolescents identity and the process one adopts in problem-solving and decision making with regard to issues that are relevant for her/his identity. Therefore, it is felt that identity styles of ninth and eleventh grade may relate significantly with their cognitive and affective functioning, though the pattern of relationship may vary from ninth to eleventh grade because of increased maturity and more experience.

Identity styles may also relate significantly with the cognitive and affective functioning of female and male adolescents, though the pattern of relationship may differ from one to another. This is because female adolescents have different guiding factors, social expectations and aspirations from that of their male counterparts. As a consequence of this their (female adolescents) approach towards mechanisms of orientation in processing relevant information for solving problems and making decisions with regard to issues that are relevant to their identity may get influenced, so also their cognitive and affective functioning and be different from that of the male adolescents. The male adolescents, on the other hand may project identity styles and cognitive and affective functioning which are in terms with what the society expects from them. However, irrespective of a different pattern of relation, it was assumed that identity styles of female and male adolescents may significantly correlate with their cognitive and affective
functioning. This is because both female and male adolescents go through same stages of development and maturation in physical, cognition, affection etc. Both go through the stage of crisis in defining a self identity and finally resolve the crisis and are able to more or less determine their preference in dealing with personal problems and make decisions with regard to various issues which they think are relevant for their identity. Therefore, it was assumed that identity styles may significantly correlate with the cognitive and affective functioning of female and male adolescents.

5th Assumption: It was assumed that identity style of adolescents may differentially predict their cognitive and affective functioning across school types, grade and gender.

Taking a step further from the above assumption it was felt that identity styles of adolescents not only relate significantly with their cognitive and affective functioning but also may predict their cognitive and affective functioning. This was because, as said earlier, identity style reflected an individual’s problem solving and decision making process with regard to issues relevant for her/his identity, which meant that a particular style of identity in a individual could encourage a particular way of decision making and problem solving in that individual. Similarly another style could encourage a different way of problem solving and decision making. Hence, it could be possible that identity style could predict their cognitive and affective functioning. Therefore, the assumption was that identity styles may differentially predict cognitive and affective functioning of adolescents across their school types, grade and gender.

3.3 Objectives:

(1) To study the variations in identity styles, cognitive and affective functioning of adolescents in the three types of school- Municipality run Government School, Kendriya Vidyalaya and Public School.
(2) To study the variations in identity style, cognitive and affective functioning of adolescents in ninth and eleventh grade.

(3) To study the variations in the identity style, cognitive and affective functioning of female and male adolescents.

(4) To study the relation between identity style and cognitive and affective functioning of female and male adolescents of both ninth and eleventh grades across the three types of schools.

(5) To study the effect of identity styles on cognitive and affective functioning of adolescents across school types, grade and gender.

3.4 **Hypothesis:**

(1) There will be significant variations in the identity styles, cognitive and affective functioning of adolescents in the three types of school- Municipality run Government School, Kendriya Vidyalaya and Public School.

(2) There will be significant variations in the identity style, cognitive and affective functioning of adolescents in the ninth and eleventh grades.

(3) Identity style, cognitive and affective functioning will significantly vary among the female and male adolescents.

(4) There will be significant correlation between identity style and cognitive and affective functioning of adolescents across their school types, grade and gender.

(5) Identity style will predict significantly the cognitive and affective functioning of adolescents across their school types, grade and gender.

3.5 **Variables:**

The variables in this study included, (a) Identity Style (b) Cognitive functioning, and, (c) Affective functioning.

(a) **Identity style**- In the present study identity style was defined according to Berzonsky's (1992). It is the "strategy which an individual
typically employs or prefers to employ when negotiating identity relevant issues." In other words, it was the style of functioning adopted or having a tendency to be adopted by an individual while seeking some issues that are of importance for forming and maintaining ones identity. Berzonsky spoke of four different styles, which are also studied in the present study. These are: Informative Style- It is that style where in an individual reflected inquisitive nature, to explore further than what was required for solving a problem in hand. There was a tendency to explore the variety of information related directly or indirectly to the problem situation. The individual having this style acted on the basis of this rich background information. Normative Style- It is that style where in an individual reflected accomplishing a task or taking necessary decisions that are in terms with values, standards and norms that are held by significant others of the individual. She/he prefers to function according to set patterns of society or as expected from her/him under specific circumstances by her/his significant others. Avoidant/Diffuse Style- It is that style where in an individual tended to procrastinate or delay the much needed action for solving an identity relevant issue. In other words, an individual could be in the Avoidant/diffuse style of she/he exhibited a tendency to delay or take a back seat when asked to solve a problem or make a decision with regard to an issue that is relevant for her/his identity. Commitment Style- It is that style where in an individual reflected accomplishing a task or taking necessary action on grounds of one being committed to do the same. In other words, an individual in this style exhibited that the task in hand needed to be done because of the commitment made to some form of supervisory figure (parent, teacher, boss at office etc.). Hence, the driving force behind an individual's behavior and action in this style was commitment.

(b) Cognitive functioning- In the present study cognitive functioning of the adolescents was determined by their (i) cognitive planning strategy, and (ii) academic performance. Cognitive planning strategy- It is the strategy(s) that an individual adopts in planning a task in hand
with the purpose of achieving a desired goal. The effectiveness and efficiency of the strategies reflect the individual’s planning skills. **Academic Performance**—Academic performance was defined as the level of performance achieved by an individual in the subjects taught in her/his school.

(c) **Affective functioning**—In the present study affective functioning of the adolescents was determined by their (i) self esteem, (ii) life satisfaction, and, (iii) positive and negative affect. **Self-esteem**—It stands for the worthiness that an individual feels about oneself. It is the pride in being what one is. Hall and Lindzley (1979) said that self esteem involves attitudes, feelings, perceptions and evaluations of the self as an object. **Life Satisfaction**—This was defined as the level of satisfaction that individuals experienced in their personal and social life. **Positive and negative affect**—Positive affect reflected individuals feeling of enthusiasm, activeness and alertness. High positive affect was inferred as a state of high energy, high concentration level and pleasurable engagement, while low positive affect was marked with lethargy, sadness etc. Negative affect was a general dimension of subjective distress and unpleasant engagement that comprised within it a variety of aversive moods such as anger, disgust, fear, irritation etc. A low negative affect was inferred as a state of calmness and serenity.

(d) **Socio-economic-status**—This variable reflected the social and economic position of the adolescents' family in terms of their parental education, occupation and monthly income.

3.6 **Tools:**

The tools that were used are—(1) Identity style questionnaire, (2) Strategic planning test, (3) Self esteem scale, (4) Life satisfaction scale, (5) Positive affect negative affect schedule, and (6) Personal information sheet.

**Identity style questionnaire:** This questionnaire of Berzonsky (1986) is a self-rating inventory, where the adolescents' identity style towards religion, politics, occupation and personal life in general was
assessed. The questionnaire consisted of forty items, rated on a five point scale ranging from "not at all like me" to "very much like me". The internal reliability of this scale was for informative style .53, for normative style .52, for avoidant/diffuse style .59 and for commitment .77. The test-retest reliability was .86 for informative style, .78 for normative style, .78 for avoidant/diffuse style and .84 for commitment (for details of the identity style questionnaire refer to appendix-2).

**Strategic Planning test:** Cognitive planning was measured using the test which was designed by Das, Naglieri and Kirby (1994). It measured the organisation, persistence, motivation, independence, flexibility, cooperation, uniqueness and comprehension ability. This test required the subject to write a planned composition, where she/he was shown a picture or given a situation from day-to-day activity. Then the subject was asked to assign priority to the four objectives (given by researcher) and write a brief composition based on the four objectives as to how and why do the subject believe that the objectives, in their chosen priority, will help in achieving the goal. The original test was administrated to post graduate students of IIM Ahmedabad and hence the situational goal given was related to managerial job. In the present study, the subjects being school going adolescents the situation and goal had been conceptuatised and readapted to suit them. Thus, the situation was annual school fete and goal was the subject’s class being awarded first prize for putting up the best stall (for details of the cognitive planning test refer to appendix-3).

**Academic Performance:** This was assessed by the average performance of the adolescents in the previous grade and their present grade. Thus, a ninth standard adolescent’s performance in eighth grade final examination and the ninth grade mid term examination were taken and averaged to known her/his academic performance.

**Self-esteem scale:** Rosenberg's (1965) self-esteem scale consisting of six items on the dimensions of positive and negative self-esteem was used in order to assess the adolescents' self-esteem. Each item was on a five-point scale ranging from "strongly agree" to "strongly
disagree". The positive items assessed the individual's positive perception about oneself, such as being capable, worthy etc., while the negative items assessed the individual's negative perception about oneself. The internal reliability of the scale was found to be .41 and .40 respectively (for details of the self-esteem scale refer to appendix-4).

**Life satisfaction scale:** The "Life satisfaction scale" of Warr, Cook and Wall (1979) was used to assess the adolescents' satisfaction presently in life. The sixteen item test measured and responded on a five point scale, ranging from "most satisfied" to "most unsatisfied" (for details of this scale refer to appendix-5).

**Positive affect Negative affect Schedule:** The positive affect negative affect schedule (PANAS) of Watson, Clark and Tellegen (1988) was used to assess adolescents' positive and negative feelings. It required the subjects to report on a five point scale. The schedule consisted of twenty statements of which ten were related to positive feelings such as inspired, strong, interested etc., while the remaining ten were related to negative feelings such as hostile, afraid, jittery etc. The reliability of the schedule was .47 for both positive and negative affect (for details of the schedule refer to appendix-6).

**Personal information sheet:** In this the adolescents personal details were gathered such as to which school she/he goes to, which grade, parents educational qualifications, their occupation, number of siblings, and monthly income of the family, approximately (for details of the personal information sheet refer to appendix-1).

3.7 Research Design:

In the present study a correlational design having three factors was followed. The three factors whose effects were studied on the selected variables are—(a) school types (Municipality run Government school, Kendriya Vidyalaya and Public School), (b) grades (ninth and eleventh) and (c) gender (female and male) adolescents.
3.8 Sample and field study:

The subjects for this study were female and male adolescents who were in the stage of middle adolescence, studying in the ninth and eleventh grades. Three types of schools were chosen based on their management bodies. These were-(a) New Delhi Municipality Corporation Schools (NDMC) which were run by the New Delhi Municipality Corporation; (b) Kendriya Vidyalaya (KV) which were run by the Kendriya Vidyalaya Sangathan; and (c) Public school, which were run by private management bodies. The sample size was four hundred and four (404) distribution of which has been given below. Incidental sampling method was used i.e. on the day of administration of the test, the entire class (all subjects present) were taken for the administration and analysis.

Table 3.1 Distribution of the Sample

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<thead>
<tr>
<th>School 1 (NDMC School)</th>
<th>School 2 (Kendriya Vidyalaya)</th>
<th>School3 (Public School)</th>
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<td>xith</td>
<td>ixth</td>
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<tr>
<td>Male</td>
<td>40</td>
<td>30</td>
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<tr>
<td>Female</td>
<td>40</td>
<td>24</td>
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The first step for field study comprised of selecting school types and schools. This, as said earlier was accomplished by selecting schools on the ground of their management types. Next, the researcher sought permission from the schools that belonged to the selected three school types. The researcher then personally approached the schools, which had given permission to conduct this study, and explained to the principal (s) the aim of the study. This was followed by meeting with the class teacher of the respective grades. Discussion with the teachers helped the researcher in making herself familiar with the students—for by then she had visited the school and the respective classes number of times—on the pretext of meeting their teacher. The teacher’s guidance as to when the adolescents could be administered the questionnaires also helped. Having fixed the day—in consultation with the class teacher, the
researcher first made a brief introduction about her academic background, followed by a general idea of the areas covered in the questionnaire. The purpose of this was firstly, to inculcate a relaxed environment in the classroom, thus breaking the walls of formality, and, secondly, to arouse enough interest and enthusiasm in the adolescents. Then the questionnaire was distributed to the class. The tests were administered one at a time, starting with the “Personal information sheet” and ending with “Positive affect and negative affect schedule”. Finally, the data were coded according to the requirements of the respective questionnaires.

3.9 Coding and Analysis:
Different coding schemes were followed for each test/questionnaire.

(1) **Personal information sheet**—This sheet consisted of—(a) *Parental qualification of father and mother*: Grading for this was—(1) Below 12th, (2) Graduate, (3) Postgraduate, (4) Professional (Engineer, MBA, MBBS, etc.). (b) *Parental occupation (father’s)*. Grading for this was—(1) Private, (2) Government, and (3) Business, *(mother’s)* grading was—(1) Housewife, (2) Private, (3) Government, and (4) Business. (c) *Family size*. The total number of family members (parents, siblings) living together under the same roof and sharing the same kitchen were considered. (d) *Monthly Income*. Grading for this was—(1) below 5000, (2) 5000 to 10,000, (3) above 10,000 (4) Do not know.

(2) **Identity style questionnaire**—In this questionnaire the coding was as per the coded response of the subject i.e. if the subject responded for 5 (by ticking on it) then the code was also taken as 5.

(3) **Cognitive planning test**—The coding for this test was based on the subjects performance which was a composition on why she/he thought that the selected priority of strategies would help her/his class to achieve the goal. The scoring followed the same
pattern as designed by Das and his associates (1996). Several criteria were used to assess subjects’ performance. Scores were ranged between one to seven, wherein ‘one’ was for the best and ‘seven’ for the worst. Therefore, lower the planning score, better was a subject’s planning ability. Below is given an example of the coding (details of the coding are available in the appendix-2).

Query – Have all strategies been mentioned in the essay?

<table>
<thead>
<tr>
<th>Code</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Criterion for Coding</td>
<td>Mention all Four Strategies</td>
<td>Mention 2 to 3 Strategies clearly</td>
<td>Does not mention any strategy/ clearly</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(4) **Self-esteem scale**—This scale had the following keys of marking the subject’s response—(a) strongly agree; (b) agree; (c) moderately agree; (d) disagree; and (e) strongly disagree. The code for first, second, third and fifth statements were (a)=5; (b)=4; (c)=3; (d)=2 and (e)=1. The code for fourth and sixth statements were the reverse, i.e. (a)=1; (b)=2; (c)=3; (d)=4 and (e)=5. Hence, a high score reflected a high self-esteem.

(5) **Life Satisfaction scale**—The keys used to mark a response by the subjects, in this scale, were—(a) most satisfied; (b) satisfied; (c) moderate; (d) dissatisfied; and (e) most dissatisfied. The codes for all the twenty statements were—(a)=5; (b)=4, (c)=3; (d)=2 and (e)=1. Therefore, a high score in this scale reflected high satisfaction of the subject with her/his life presently.

(6) **Positive affect negative affect schedule**—In this test there were two sets of coding one for positive and the other for negative affect. However the keys used by the subjects were same. These were—(a) very slightly; (b) little; (c) moderate; (d) quiet a bit; (e) extremely. The statements that reflected positive affect were—first, third, fifth, ninth, tenth, twelfth, fourteenth, sixteenth, seventeenth, and nineteenth. The coding for these statements
were (a)=1; (b)=2; (c)=3; (d)=4; and (e)=5. The statements reflecting negative affect were second, fourth, sixth, seventh, eighth, and twentieth and the codes assigned to the keys for these statements were – (a) =5; (b)=4; (c)=3; (d)=2; and (e)=1. In this scale a high positive score reflected a high positive affect, so also a high negative score reflected a high negative affect. However, a low positive affect was not a reflection of high negative affect rather it reflected low positive affect. Therefore, to understand subjects' positive and negative affect it was necessary to take into account the scores on positive affect as well as negative affect.

Analysis:
Means, standard deviations, analysis of variance, correlation and regression were used to analyse the data.