Chapter – II

Review
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REVIEW OF RELATED LITERATURE

The planning and execution of research should always be preceded by review of the literature in the related field as it helps the researcher to get insight into the work done and provides the background and context for the research problem. A thorough survey of the related literature is an integral part of research work. Related Literature is the foundation on which the structure of further studies is held. It is a crucial aspect of the planning of the study, and the time spent in such a survey is a fruitful phase of a research programme. Every investigator must know what sources are available in the field of enquiry, which are likely to be useful and where and how to find them. It enables the individual not only to gain familiarity with the knowledge of the past performance and developments in the concerned area but also enhances the ability of the individual to make his own contribution towards increasing the previous stock of knowledge either by adding something altogether new or developing the old one with a new perspective.

Keeping in mind the above-mentioned purposes, efforts were made in connection with the present study too and the following related literature is reported.

2.1: RESEARCH STUDIES RELATED TO INSTRUCTIONAL MODELS/AWARENESS TRAINING MODEL:

Nayaam and Kareem (1985) conducted an experimental study comparing the effects of the awareness training model and the traditional method for teaching social studies in two secondary schools for boys. The main purpose of this study was to compare the effectiveness of awareness model and traditional method of teaching history on the achievements, attitude and critical thinking ability of the students. The basic design chosen for the experiment was adopted from an experimental design referred to as the non-randomized control group pre-test/post-test design. Six classes from two secondary schools for boys were involved in the study and there were 25 students in each class. Three history teachers were involved, each teaching one class by the awareness training model and a second
class by the traditional method. The result of the pre-tests showed that the students in the six classes of both experimental and traditional groups possessed the same level of critical thinking and attitude towards history. Once the equivalence was established the experiment was administered for 4 weeks. The results indicated that the experimental second year students in the two schools performed significantly better than the traditional second year students in the same schools on the achievement test and Watson Glaser Critical Thinking Appraisal. There was no significant difference in the attitude of the students in both the schools.

Imelda and Lowell (1985) investigated the effect of Awareness Training Model on learning outcomes in comparison to traditional teaching. The main aims and objectives of this study were to find out the students' reactions about the new approach, that is, Awareness Training Model Approach and Traditional Teaching. The study was carried out in two schools on the students of seventh class. The achievement scores of students of experimental group were significantly higher than the achievement scores of the students of control group after experimentation. This proved the usefulness of Awareness Training approach for increasing the achievement of students than the traditional approach students also showed highly favourable reaction towards this new approach.

Royal and Van (1986) investigated effects of the use of four types of teaching models on student self-awareness of academic ability and attitude toward the teacher. This study developed and used a multidimensional observation instrument to compare various families of teaching models: behavior modification models, information processing models, social interaction models, and personal models. Classes of students whose teachers utilized various families of teaching models in differing proportions differed on Specific Self-Awareness of Academic Ability but not on Attitude toward the Teacher. Teachers who used positive reinforcers abundantly and/or information processing models were associated with higher student Specific Self-Awareness of Academic Ability scores.

Crease (1986) studied the efficacy of awareness training in learning outcomes. The learning outcomes of the students taught by awareness training model approach was significantly higher even at 0.01 level in comparison to the
mean learning outcome of the students of control group taught by traditional approach. One of the minor aims of her study was to determine the creativity of the students. The analysis was done in verbal and non-verbal creativity. The mean scores of experimental group were higher than the mean scores of control group in all areas of creativity such as Fluency, Flexibility and Originality total verbal creativity. But the difference was not significant even at 0.05 level. The relationship of Fluency, Flexibility and Total Verbal Creativity with Achievement was low.

Sergio (1987) studied classification of children through two developmental information-processing models. Two different theories (Pascual-Leone's and Keating's) of information processing models development allow predictions about subjects' performance in some classification tasks. M-space and its interaction with cognitive style are constructs of Pascual-Leone's neo-Piagetian theory, evaluated here together with a micro model for classification problems, consistent with the same theory, proposed by Morra. Keating and Bobbitt maintain that cognitive processes can be divided in phases; their construct of efficiency in the operation phase was evaluated. Subjects were 40 six-year-olds, selected out of 76. Predictions drawn from Keating and Bobbitt's model are falsified most likely because of the inadequacy of models based on subtractive analysis of reaction times. Predictions from Pascual Leone's theory were almost wholly confirmed. However, some unpredicted (but compatible) data raised the problem of a re discussion of the schema construct, proposed by Piaget and incorporated in the neo-Piagetian theory.

Ahmed (1989) conducted a study entitled analysis of outcomes of biology through awareness training approach. The purpose of the study was to investigate quantitatively the overall change in the six instructional outcomes that may be attributed to the teaching of Biology. The outcome variables were achievement, science process skills, critical thinking, laboratory skills, attitudes towards science and scientists and interest in science. The effectiveness of the awareness training approach in teaching biology was determined by calculating effect sizes for the different outcome variables for each study in a common matrix for all studies. The
result was an estimate of how different the experimental group was from the control group across all collected studies. The coded information of each study including the values of the effect sizes that were calculated for each outcome variable contributed the database for the statistical analysis. A special exploratory data analysis technique was also used to provide more accurate estimation of the average effect sizes of the awareness approach. The result revealed a definite superiority in favour of teaching biology with the awareness training approach over the traditional approach in helping students’ development of the instructional (objective) outcomes. Students taught by awareness mode of instruction improved their science process skills, scientific attitudes, critical thinking, achievement and laboratory skills more than students taught by traditional approach.

Jyoti (1990) attempted to study the effect of inquiry training strategy on process skills and achievement on biology. The sample of the study was 124 students of class VIII. Students were assigned to the experimental and control group using matching technique based on percentile scores obtained in Raven Progressive Matrices test. The control group was taught by the conventional method and the experimental group was taught by inquiry approach. The instruction was spread over 50 days. The tools used were the process skill test and achievement test in Biology. The major findings were (1) there was no significant difference between the means of gain scores in process skills in Biology of experimental and control groups. (2) There was a significant sex difference between means of gain scores in process skill in Biology of experimental group in prediction and inferences, i.e., girls were better than boys. (3) There was no significant difference between the students of different intellectual levels in experimental and control groups in process skills in Biology. (4) There was a significant difference between the means of gain scores in achievement in Biology with respect to all objectives and total scores of experimental and control groups.

Keyton (1991) in the study entitled exploring interpersonal compatibility in groups investigated William Schutz's three-dimensional theory of interpersonal behavior and compatibility (FIRO) related to awareness training model of teaching to determine its validity as a group measure of compatibility. Data were collected
from 248 students enrolled in a multi-section course in small group communications at a large midwestern university. Subjects self-selected themselves into 47 groups of no less than five and no more than seven and participated in five hours of introductory interaction. After this, they were asked to develop and present two exercises on group communication topics. Several instruments, including the FIRO-B instrument, were administered to the subjects. Results revealed that the methodology of computing group compatibility from equations that measure internal dyadic compatibilities was inefficient and inappropriate. After a reanalysis, findings suggested that even though a specific dyad in a group is compatible, the behavior and interaction of other group members may be an intervening factor causing a compatible dyad to be ineffective in the group context. The complexity of group interaction as well as the competition for attention among the group's many members may keep specific dyadic compatibilities from surfacing. Findings also suggested that defining group compatibility by measuring dyadic compatibility runs contrary to the notion of group synergy—that a group may be more than an additive function of its parts. Continued investigations into methodological issues to determine if compatibility is a useful discriminator in distinguishing effective from ineffective groups appear to be called for.

Mellin and William (1992) attempted to compare structured and instructional approaches based on awareness training in affecting eight grade students understanding of and response to the persuasive language usage in the media. The structured approach was conducted by having students role-play mass communicators, after being instructed with mini-lectures based on concepts from Sociology and Social Psychology that dealt with the double speak committee concerns. The instructional approach was based on models of teaching: Awareness training activities. Responses were sought from the students in both the cognitive and affective domains. The results showed that the structured instructional approach was not effective in increasing awareness whereas the awareness instructional approach was effective in increasing awareness or affecting behavioural patterns of the students.
Maria (1994) conducted an experimental study to evaluate the effectiveness of the use of awareness training programme to foster creativity in intermediate grade students. The aim of this study was to determine the effect of awareness training instruction in fostering creativity in 4th, 5th and 6th grade students. The tools used were (1) Training profile instrument, and (2) Verbal and Figural test of the Torrance test of creative thinking. For analysis of data, two way analysis of variance with a covariant was run using the general linear model. The findings of the study indicated that there was no significant difference, between the scores of the verbal test for the 4th grade treatment and control subjects. 5th and 6th grade treatment subjects scored significantly higher on the verbal test than the control group. No significant difference was observed between the scores of the two groups on the figural test.

Nayal (1995) found that training modules were designed to help individual, recognize their feelings and behaviour pattern with respect to social integration to participate in social groups to increase self awareness, to understand self concept, self responsibility and morality.

Jackman and Swan (1996) investigated the effect of instructional models on the effectiveness of distance education. The purpose of this study was to identify which instructional models based on the framework of Joyce, Weil, and Showers, could be used effectively in distance education over the Interactive Video Network (IVN) system in North Dakota. Instructional models have been organized into families such as Information Processing, Social, Personal, and Behavioral systems. Each family contains several different instructional models with similar assumptions leading to similar outcomes. Models may involve techniques like advance organizers, analogies, memorization, simulation, and role playing. Subjects were 126 students enrolled in selected IVN distance education courses at North Dakota State University during 1993-1994 and 1994-1995 academic years and the summer 1995 session. These included students enrolled in graduate courses offered by the School of Education, and one undergraduate/graduate course offered by the College of Business. A survey was administered to students at both on-campus and off-campus sites to measure the most effective and
preferred of the instructional models. Results indicated that the six highest ranking instructional models (representing three of the families of instructional models) most effectively utilized over a distance delivery system are: role playing; simulation; jurisprudential: memorization; synectics; and inquiry. Students perceived direct instruction to be the least effective instructional model. They preferred models that actively engage them as learners both physically and mentally; and which make their learning enjoyable and stress free.

William and Phillip (1997) in their report on study entitled violence in the classrooms: Where we stand provided an overview of their special issue on preparing administrators and teachers to handle violence and problematic behaviors in schools through effective teaching strategies by applying specific models of teaching. This issue of Intervention in School and Clinic focused on the topic of violence in the classroom. In addition to acquainting the teachers with teaching models, the various articles also presented curriculum and teaching models that can be used in integrated settings. It was confirmed by the pilot study held on 126 students of grade IX that that Intervention of specific models were able to bring desired change in the behavior of students with reference to personal values and their academic achievement. Models were helpful in showcasing the outstanding work of so many talented individuals.

Passi et al. (1997) researched on the effectiveness of strategies of training in models of teaching, using different teaching models. They found that training strategies (in the form of lecture discussion, demonstration and peer practice) in various training models enhanced understanding of the theoretical aspects very well. They also found that various training strategies brought significant positive changes in their willingness to implement the models.

Sivakumar and Prema (1999) conducted a study in the Department of Education at Alagappa University, Karaikudi, India which was aimed at finding out the effectiveness of Suchman’s Inquiry Training Model in learning Biology. The study was conducted on 200 students of IX standard of a Secondary School at Karaikudi. They compared the effectiveness of students taught through ITM and through conventional teaching of Biology. The results indicated that training in
ITM improves the achievement of the learner in Biology. Also ITM was found to be more effective than the conventional method in improving achievement in Biology.

Chang and Lee (2000) conducted a study entitled team-teaching model for practicing training of awareness in high school: collaboration between computer and subject teachers. Awareness training model (ATM) was a highly effective means of motivating students for stress free and independent leaning. However, training or encouraging teachers to practice ATM in their classrooms was challenging, especially if the educational system does not accommodate creative teaching practices. In particular, in a test-driven educational system, time constraints and an excess of teaching content make it difficult to practice ATM at the high school level. This work presented a novel team-teaching model that was based on collaboration between subject teachers and the computer teacher to facilitate ATM in the classroom. A two-year experiment was conducted to study the feasibility of the proposed model, in which the school computer teacher conducted ATM with the 10th grade students in the first year, and subject teachers conduct ATM with the 11th grade students in the second year. Experimental results indicated that the proposed model was feasible in the given educational setting. No class time was lost, and the subject teacher successfully conducted ATM activities. Furthermore, a follow-up survey indicated that the students enjoyed the ATM activities in both classes and this technique was helpful in developing various other strategies which increase harmony and productivity when working in teams.

Seaberg and Ramirez (2001) studied the interpersonal behavior and leader behavior characteristics of business administration and educational administration graduate students. This study investigated the relationship between interpersonal behaviors and leader behaviors for present and prospective leaders in business administration and educational administration. Interpersonal behavior characteristics were measured by Schutz’ FIRO-B (Fundamental Interpersonal Relations Orientation - Behavior) Scales given in awareness training model of personal family models, while leader behavior characteristics were measured by
Stogdill's Leader Behavior Description Questionnaire XII given in directive teaching models. It has illustrated the difference between two groups' assessment measured through models of different families. Populations consisted of business administration graduate students and educational administration graduate students enrolled in the College of Business Administration and Education in a large (urban) southwestern state-supported university. Samples consisted of 83 business administration and 71 educational administration students; 106 were males, 48 were females. *Expressed Inclusion* was the most powerful leader behavior for the 154 respondents, for it was significantly related to 8 of 12 leader behavior characteristics. The least powerful predictors of leader behavior characteristics were *Expressed Affection* and *Wanted Affection*. The findings demonstrated that *Expressed Inclusion* and *Wanted Inclusion* must be satisfied first before a person takes care of *Control and Affection*.

**Perumal (2002)** in a comparative study of the outcomes of teaching related unit in Economics by different teaching strategies at the higher secondary stage found model based on social awareness to be the most effective in bringing better achievement and in maintaining cordial relations between teacher and taught. It was helpful in creating social awareness also in the subject of Economics.

**Ferrari and Sternberg (2002)** studied the nurturing effects of models of teaching in evolution of self control. According to their model which was based on awareness training programme, the student traverses 14 steps through four skill levels. The study concluded that it was very effective to teach students with the models of strategies to develop self awareness and self control.

**Hummell (2003)** investigated in the study entitled synectics for creative thinking in technology education that Synectics is a creative problem-solving process developed by William J. J. Gordon and George Prince in the 1960s (Gordon, 1961). A result of Gordon and Prince observing brainstorming sessions that achieved varying levels of success, Synectics outlined the processes that people can use to help them overcome mental blocks while working on difficult tasks. By using Synectics, people's divergent thinking and capacity for solving problems increase. This study presented scenarios that an instructor, using
Synectics and creative problem-solving techniques, can apply to teach students to solve a multitude of academic challenges. Synectics was yet another tool that can be used in creative problem solving to achieve more productive student problem-solving sessions. Synectics can be used in a wide variety of educational environments as well. Face-to-face, module-based, and distance education instructors alike can use the techniques to foster creative thinking and improve problem-solving skills among their students. Knowing how divergent thinking and Synectics work can help in any number of areas, from marketing, writing, personnel, leadership, and funding to general education.

Johnston and Susanne (2004) conducted a study to determine the correlation between achievement scores in science and scores on formal operations test in Junior High School students and to find evidence indicating whether a higher level of operational thought was related to achievement of higher scores in inquiry training based science than in non-inquiry training based science in Junior High School. All of the four hundred students of a Rural Junior High School were tested within the shorthand longest test to determine their operational level. Classifying non-procedural teacher and students teaching using Bloom’s taxonomy each science section was ranked as inquiry or non-inquiry. A Pearson product moment correlation was run between the operational scores obtained from the longest test and yearly average science grades, between science achievement scores from the Differential Aptitude Test and grades and between operation scores and science achievement scores. The results indicated that the 52% of the population was found to be formal operational. Scheffe’s Test run on the ANOVA indicated that there was a significant difference between students with high grades, achievement scores and operational level in inquiry classes and students with low grades, achievement scores and operational levels in non-inquiry classes.

Yuhwa, Dane and Gellman (2005) in their study entitled An awareness training model: teaching empathy and cultural sensitivity examined the effects of a pilot project for an awareness training model in teaching culturally sensitive, empathic communication skills. It attempted to integrate and communicate the theoretical, conceptual, and experiential understanding of cross-cultural empathy.
through the practice of mindful attitudes. Students were introduced to materials through a series of exercises which included mirroring breathing observation, posture, and moving awareness. These exercises fostered a state of openness through the experience of emptying, contemplation, and being-present. The preliminary findings indicated that the students were able to verbalize new learning experiences which included: being more attuned with their bodily awareness, sensing the flow of energy with the other, letting go of power struggles, and pre-existing ideas, and experiencing a different kind of human connectedness and concern with the other.

Meena (2006) conducted a study entitled impact of barnlund transactional model of communication on life skills of secondary school children in relation to their learning approaches. The main objective of the research was to study the impact of barnlund transactional model of communication and learning approaches on life skills of secondary school children. Sample of 296 students of X grade was drawn from four different govt. schools of U.T., Chandigarh through random sampling method. 139 were denoted to experimental group and 157 were in control group. Results showed that barnlund transactional model of communication was very effective to enhance the performance of the students in the economic subject at the secondary level as compared to the traditional method of teaching. It was evident that barnlund transactional model of communication was also proved to be very effective and useful tool for enhancing life skills of the students. i.e. skill of critical thinking, decision making, and communication skills. Further the results showed that the students with the deep approach of learning, who have normally a high potential for long lasting learning, may satisfy their deep urge through barnlund transactional model of communication with equivalent impact on surface approach students as well.

Chaudhari, Vaidya and Mahapatra (2007) studied various models of teaching to develop social skills among students. They found that specific strategies were helpful in developing the ability to interact effectively with others. Social skills training programme have repeatedly demonstrated their effectiveness in developing a wide range of interpersonal behaviours and skills in diverse
population of children and adolescents. It was also very helpful to teachers to teach in meaningful ways that can be valued by the youth.

Pany (2008) studied the effectiveness of synectics model of teaching in enhancing creativity, academic achievement and achievement motivation of learners. The study was undertaken with the objectives to study the effectiveness of the Making Familiar Strange (MH) approach of synectic’s model of teaching on development of learners’ creative thinking ability, to study the impact of MFS approach of synectics model of teaching on development of learners achievement in the subject general science and to study the impacts of MFS approach of synectics model of teaching on achievement motivation of the learners. The investigator of the study followed the non-equivalent, control group design of quasi-experimental type. For the purpose of experimentation two primary schools of Bhubaneswar city, having almost similar facility, were randomly selected out of four apparently similar type of schools with regard to their management, infrastructural facility; teacher and student strength. All the 35 subjects of the experimental group and 36 subjects of the control group were subjected to the teaching of 18 lessons on General science. The experimental group was taught by the investigator himself by following the MFS approach of Synectics model of teaching whereas the control group was taught by their regular class teacher by following the traditional method of teaching. The subjects of both the groups were pre and post tested on all the dependent variables such as; creativity, academic achievement and achievement motivation. The pre-test scores of both the control and experimental groups were found almost equivalent, when tested for their normality of distribution. As such, all the hypotheses were tested by means as applying the \textit{t-test} statistical technique. The major findings of the study suggested that the Making Familiar Strange (MFS) approach of synectics model of teaching was found to be effective in enhancing the creative thinking ability of the learners. The MFS approach of synectics model of teaching did not prove to be effective in enhancing the achievement motivation of the learners. The MFS approach of synectics model of teaching did not put any significant impact upon the achievement of the learners in the subject of general science.
Christane (2008) investigated the impact of awareness training model of teaching in life science to develop creativity among pupils. The study was conducted to reveal the impact of awareness training model of teaching in life science to develop creativity among pupils. The main objective of the study was to see the significant difference between effects of awareness training model and traditional method of teaching life science in development of creative thinking ability of students. It constituted 120 students of class IX of two different schools of which 64 were girls and 56 were boys. It was found that the experimental group taught through awareness training model of teaching obtains significantly higher post test scholastic achievement score than the control group. Moreover the gain score of the experimental group in creativity was also higher than the control group showing that teaching through awareness training model was proved to be better than traditional method of teaching in achieving creativity as well as academic achievement.

Singh (2009) undertook a study developing competence in social dialogue through jurisprudential inquiry model. The study was conducted to find out the effectiveness of Jurisprudential Inquiry Model of teaching on competence in social dialogue of school students. The experiment was conducted on 196 students of class IX. They were divided in four parallel groups on the basis of intelligence and socio-economic status (SES). During the experimentation, the students were tested and assessed three times for social dialogue skill. Hence, three-way factorial design (2x2x3) of trend analysis was followed to analyse the data. The findings indicated that socio-economic status effect the improvement in competence in social dialogue as low SES students possessed higher scores than high SES students. Moreover, the trend of improvement with different levels of intelligence and occasions was linear and the direction of trend was upward. Overall, the trend of improvement on different testing occasions was linear and direction of it was upward. It means that the competence in social dialogue went on increasing with the treatment of JIM. Socio-Economic Status effects the improvement in mean scores of the students for competence in Social dialogue significantly when taught through JIM. Low SES students possessed higher scores than high SES students.
The trend of improvement on different testing occasions was linear and the direction of the trend was upward. In other words, mean scores for competence in social dialogue went on increasing with the treatment of JIM. The trend of improvement with different levels of intelligence and occasions was linear and the direction of the trend was upward. It connotes that mean scores with different levels of intelligence at different occasions for the competence in social dialogue went on increasing with the treatment. The findings of the study revealed that Jurisprudential Inquiry Model of teaching was having direct-bearing on the improvement in competency in Social dialogue of the students belonging to different levels of intelligence and socio-economic status. It has an implication that this method of teaching may be adopted by the teachers if they wish to improve the Competence in Social dialogue of the students which was most desirable in this competitive world for the adjustment in the society throughout life.

Aruna and Smitha (2009) studied the effectiveness of concept attainment model of teaching on academic achievement in biology. This study aimed at finding the effectiveness of concept attainment model of teaching with constructivist method of teaching on achievement in biology of standard VIII pupils. A sample of 200 students was selected at random. 100 students were selected randomly to form an experimental group and another 100 to form the control group for the study. The experimental group was given the concept attainment model of teaching and the control group was taught through the constructivist model of teaching. The data were collected and analyzed the mean scores for achievement between the experimental and the control group. The results showed the positive impact of concept attainment model. It showed that the teaching by the models of teaching is fruitful in comparison of simple teaching. This study also revealed the same type of results by stating the superiority of concept attainment model over the constructivist method of teaching. It also proved that the model based teaching is effective for the proper understanding and clarification of the concepts.
Stolter and Walker (2010) examined the effects of awareness training based learning in strengthening the links between teaching and disciplinary research. Awareness-based learning has been promoted as a student-centered approach with the help of awareness training model of teaching that can strengthen the links between teaching and research. This study examined the potential of awareness training model of teaching to strengthen the teaching-research nexus by analyzing three case studies: a structured awareness third-year endocrinology medicine module, a guided awareness second-year political communications course and an open awareness third-year ecology course. The relation between teaching and research differed significantly amongst these three cases and led to a reconceptualisation of awareness-based learning. A model was then developed to link the focus of learning with the level of independence and the potential strength of the teaching-research nexus. The findings showed that, if teachers were aimed for strong links between teaching and research, they should adopt an open, discovery-oriented awareness-based learning approach. However, more structured and guided forms of awareness can be useful to progressively develop particular self awareness skills.

Tamara and Foldy (2010) in their study entitled a pedagogical model for increasing race-related multicultural counseling competency proposed a pedagogical model to enhance what the investigator call race-related multicultural counseling competency, which focused on race, racism, and racial identity development. The fundamental premise was that two types of safety, psychological safety and identity safety, must be present. With the increasing need for multicultural competence, questions have emerged about the appropriate classroom strategies to cultivate growth in this area. These questions have been further complicated by a growing focus on self-awareness, which has increased the affective demands of and student resistance to the material. The investigator further found that safety requires attention to both course content and teaching processes as well as an incremental learning approach that emphasized race-related competence as a lifelong developmental process.
Benedict (2010) studied mutual comparison reception model (MCRM) of concept development in secondary science learning: A variation to brunarian theory. The study was the outcome of an experiential learning episode encountered by a teacher educator (investigator) with a group of student-teachers under his mentorship during a session of the practice teaching programme (2008-09) at the secondary school level. The crisis faced by a student teacher in connection with the development of a lesson template based on Brunarian theory of concept development and Joyce and Weil's formulation of Information Processing Family of Models of Teaching turned out to be an occasion of Eureka to construct a new version of Concept Attainment Model (CAM) of teaching. Here the practitioners involved in the exploration proposes a twist to Concept Attainment Model of teaching, namely Mutual Comparison Reception Model of CAM, which seemed to be highly suitable for the learning of those secondary level science concepts which were interlinked in the conceptual ladder. The field level experiences of the student teachers with the proposed model of teaching were also reviewed in the study. The study also highlighted the positive difference in the teaching efficiency with the help of selected lesson template developed by the student teachers based on the proposed model.

Ruth and Christ (2011) investigated a study entitled a critique of the concept of accuracy in social information processing models of children’s peer relations. According to Kenneth Dodge’s social information processing model, children who behave aggressively do so because they interpret others’ behaviour, and evaluate aggressive acts, inaccurately. The concept of accuracy was inappropriate here because members of different social groups can differ systematically in their interpretations and evaluations of behaviour. Imposing the concept of accuracy exalted one social group’s views as accurate, with others seen as flawed. Social information processing models of teaching helped in inculcating social skills and values which in turn helpful in making good rapport in peer group as well as in achieving more in studies. It was tested in this study on 345 sample of X grade children. It was concluded from the study that when taught through information processing model, showed better results as compared to earlier in
academic as well as social reconstruction and integration of groups. It could remove the concept of accuracy by drawing on the theory of autopoiesis, which stated that an organism’s response to a stimulus was specified by the organism rather than by the stimulus itself. Thus the environment was seen not as information to be (in) correctly interpreted, but as a set of triggers in a person’s phenomenological world. This approach was strengthened by attention to the myriad ways in which a person’s interpretations were informed (but not determined) by other people, explaining why we were likely to form interpretations and values similar, but not identical, to others in our social groups.

Gottler (2011) explored the study entitled passionate participation in mathematics through specific models: diagnosing and improving student participation in mathematics. The purpose of this study was to investigate the reasons behind fifth grade students’ participation or non-participation in mathematical discussions, and determine whether this affected their understanding of the learning material. The researcher observed twenty-four students’ participation or non-participation in mathematical discussions in a fifth grade classroom over the course of three months. The first half of the study documented student participation or non-participation when the teacher used a lecture-based teaching model. The second half of the study documented student participation or non-participation when the researcher used an inquiry-based teaching model. Quantitative and qualitative data was collected to determine which students participated and in what manners. Assessment results were also collected and evaluated for each of the lessons in the study. The data indicated that all of the students were participating in mathematical discussions for both styles of teaching. The rates of that participation and the nature of the participation were different from student to student, and from lesson to lesson. The inquiry-based method of teaching produced more favorable results in terms of total student participation than did the lecture-based format. The research did not provide sufficient evidence to prove or disprove a definite link between student participation or non-participation in mathematical discussions to student understanding of the learning
material. Changes in the nature of student participation were affected by the mode of presentation of the learning material.

2.2: RESEARCH STUDIES RELATED TO LIFE SKILLS:

Roylew (1983) examined the racial and gender gap in the academic development of African American and White children from kindergarten to 5th grade. Their main goal was to determine the extent to which social and behavioral factors, including social skills, problem behaviors, and interpersonal skills, explain these gaps and shed light on the academic difficulties specifically experienced by African American boys. The authors utilized the Early Childhood Longitudinal Study-Kindergarten Cohort (ECLS-K) sample and applied growth curve modeling. Learning-related social skills explained the literacy development of African American boys over and above the effects of problem behaviors, socioeconomic status, and home literacy environment. Results suggested that emphasis placed on the behavior problems and the social risk factors associated with African American boys needs to be refocused and should be accompanied by increased efforts to improve life skills in the classroom context and beyond.

Botvin (1985) has developed a curriculum based on Life Skills Training Program (LST), the LST program incorporates a curriculum to teach a wide range of personal and social skills in order to improve youth’s general competence and reduce potential motivations for substance use. He reported that by LST program, 50% reduction in cigarette use among junior high students and it also has a significant impact on the attitudes relating to smoking, alcohol, and marijuana use. By participating in the program, the student’s assertiveness, social anxiety, self-esteem, decision-making and social coping skills have also developed.

Greene (1988) investigated that for every teacher who has been at a loss to help the student who seemed helpless; this was a resource that cannot be missed. In this study, the researcher detailed instructional principles to help educators model and mentor effective life skills behaviors for their students. For the child who doesn't have friends, does poorly in sports, has difficulty in learning, or who steals, lies, or bullies, the investigator provided solid, proven methods to help
these learners discover and practice better life skills. The investigator found that teaching with awareness models brought positive changes in their skills.

Hamburg (1990) in a study entitled preparing for life: The critical transition of adolescents reported that there was a need to formally and systematically teach middle and junior high school students life skills for surviving, living with others, and succeeding in a complex society. An introductory section was followed by a discussion of early adolescent development and life skills and core elements of life skills training. Attention was then given to: (1) school-base interventions, including Interpersonal Problem Solving, Social competence training, a drug and alcohol project, linked school and community programmes, and the Midwestern, a drug and alcohol – based interventions, including girl clubs of America, the summer training and education programme, and salvation army; and (3) promising new conceptual models including the school development programme, a Rochester school experiment, community prevention of alcohol and tobacco use, the violence prevention project, and research leading to an anticipated middle - school violence prevention curriculum. Concluding remarks focused on the need for dissemination of information about effective life skills training and recommendations for implementation of preventive programmes for middle schools.

Meyer and Steyn (1992) reported on a pilot programme on Acquired Immune Deficiency Syndrome (AIDS) and life skills training implemented in 12 schools in Pretoria, Laudium, Cape Town, and Soweto(South Africa). Data were collected through pre and post questionnaires and for group interviews. The purpose of the programme was to provide adolescents with accurate information on which decisions about AIDS prevention behaviour and tolerance towards people infected with the Human Immunodeficiency Virus (HIV) would be based. The programm had 10 modules each with specific teaching objectives; suggested teaching methods, teaching aids, and learning activities; and suggestions for additional reading. The modules addressed puberty and adolescence, relationships (e.g., peer, family, opposite sex); love, human sexuality, Decision Making, sexually transmitted diseases (STDs), and HIV / AIDS. Findings indicated that
students showed a general improvement in AIDS-related knowledge topics well as more positive perceptions of condom use, and more realistic perceptions regarding susceptibility, and the seriousness and outcomes of HIV/AIDS. There was also an increased perception of peer pressure to engage in sexual activity.

Halter and Lang (1994) designed guidelines to help adolescents develop skills which will encourage them to make health and positive choices about life. In addition, its design will assist adults, parents and teachers, as they guide young people through the process. The book used a series of written exercises designed to help organize the students' goals and aspirations for life. The subjects were divided into five sections. Appreciating differences, personal development, family and values, making choices, and making difference. The guide contained 96 one-hour lessons, including 18 student-driven classes which were scheduled to occur once a week. Topics in the text included gender equity and cultural diversity. The stages of personal development were examined in depth, with special attention given to self-esteem, creating dreams, and skills development (Communication, Achievement, Decision Making, and Time Management). The importance of personal integrity and personal health were also highlighted, along with the need to maintain healthy relationships with friends and family. Since choosing a career was among the more important decisions one make, a section on career planning was offered and supplemented by a discussion of the importance of money management. Finally, ways that students can create change and address world problems were explored. Numerous worksheets and exercises were included to help students learn these solutions.

Davies and Cohen (1995) explored means of incorporating educational and psychological nature - connecting methods and materials with traditional recovery activities for people at risk and as a preventative. The first part of the programme introduced high-risk high school students, most of whom had low self-esteem, to elements of nature. The second part of the programme focused on reducing chemical use and irresponsible relationships in at-risk students. Phase 1 of this part involved 3 weeks of play and creativity in natural setting. Phase 2 involved specially designed nature reconnecting activities to reduce stress and
attune participants to nature. Phase 3 consisted of a 5-day ropes course where students practiced teamwork, use Problem Solving Skills and work on fear and Stress reduction skills. The goal was to further reduce stress, and help them experience power, joy, and trust. Results of the project were overwhelmingly positive. Significantly increased scores on the Barksdale Self Esteem Index were recorded. The results suggested that the project, used in conjunction with daily Stress situations instead of artificially programmed stress activities, can serve as an ecological sound citizenship education preventative for chemical, food, and social and environmental abuse.

Paul et al. (1995) conducted a study of teacher preparation programme to assess the extent to which these programmes prepare conditions for teaching credentials to teach critical thinking and problem solving in elementary and secondary schools. With assistance from Sonoma State University interview protocols were designed for use for telephone interviews. Sample consisted of 38 public colleges and universities and 28 private ones. The major objectives of the study were (1) to assess the current teaching practices; (2) to identify exemplary teaching practice that enhances critical thinking skill; and (3) to develop policy recommendations based on the results of the study. The study reported that many teachers have no clear understanding of the basic concepts of critical thinking and very few have a comprehensive sense of how to cultivate it while teaching the content subjects or discipline. It also recommended that students should be assisted to develop certain specialized concepts, give reasons for conclusions arrived at, make interpretation of data, travel implications and consequences of decisions or actions, define problems, concerns and issues, think in the terms of others' points of view and so on.

Henke (1997) in a study entitled the effects of three methods of computer problem solving training method on psychomotor performance of college students revealed that school based problem solving training method increases the problem solving attitude of junior school students and this causes the development of self-esteem, assertion, decision-making, time management and stress management skills. The training programme was an intensive five week programme for
students. The study employed a pre-post experimental design. The groups were tested by using the various scales related to different skills. The students showed improvement in the areas of self-esteem, assertion, time management and stress management skills after the treatment.

Nava (1998) in a study entitled the self perception of personal skills between traditional versus non-traditional college students concluded that there was no significant difference between the traditional and non-traditional college students for the self perception of personal life skills. The personal life skills measured were self esteem, assertiveness, drive strength, decision making, time management, commitment ethic, stress management, aggression and deference by using the personal skills map.

Magee (1999) in a study entitled the peace leaders: a descriptive study of the life skills gained through resolution training concluded that the students who had completed training in the Citizenship and Law-Related Conflict Resolution Program had life skills of communication, problem solving and mediation in real life situations. All the students reported that the conflict resolution training had a medium to significant impact on real-life situations. The development of communication skills involved in active listening, self expression and developing as a public speaker. The attaining of life skills has a positive impact on their abilities of decision making, problem solving and conflict management with others.

Waltemire (1999) in a study entitled a kaleidoscope of opportunity: teaching life skills reported that training of life skills to the students between the ages of 17 and 19 had lead to decrease in the distress despair among them. This research reported the significant differences between the self perception of traditional and nontraditional college students personal life skills.

Buhs (2000) in a study entitled programme evaluation of the American Indian life skills development curriculum with American Indian and Caucasian adolescents found that after Life Skills Training Course, there was change in their self-esteem and depression. The pretest/ posttest of self esteem and depressive symptomatology were administered and a three-month follow up of students was
done. Qualitative analysis indicated that the students learned about the areas covered in the training programme, their self-esteem scores increased and depression decreased between pre and post test and again between the post test and follow up the depression again increased. Students did not learn significantly more about problem-solving, including what to do if in a situation with suicidal individual. According to statistical analysis, insight ratings indicated that students did not gain the insight regarding their emotions, self-esteem, problem solving and self destructive behavior up to the limit that was required.

Kumari (2002) studied development of life skills with Mathematical education. She revealed that due to technological revolution, the mathematical abilities like to explore, conjecture, reason and communicate are needed in every field of life. The problem solving situations were viable medium to link mathematics with life skills such as problem solving behaviour of students. The researcher concluded that middle class students have developed problem solving skills by learning mathematics and students were using this skill to deal with real world environment and experiences.

Rowland (2002) conducted a study entitled every child needs self-esteem: The creative drama builds self-confidence through self-expression. This work illustrated how creative drama, when used with socially deprived children under the direction of trained outside the classroom in a structured, informal setting, which emphasized play as a powerful way to learn, strengthened a self concept and increased self-esteem. Testing revealed how natural pedagogy, which honors the individual experience and preserved the child's essential freedom to play, to wonder, to experiment and to invent, allowed children to flourish and to become stable and successful. This theory was applied to children in a creative drama programme. Through the magic of theatre, using the techniques of creative drama, children creativity, and developed self-esteem and learned cooperation and responsibility. These results led to the creation of a child play-based programme those nurtured children's creative expression and the development of a handbook to enable others to replicate this programme in their communities.
West (2003) studied contextual variability in the transfer of Problem-Solving Skills. The purpose of this study was to describe how individuals learn from examples and retrieve known problems to solve new ones. Ninety-four participants from the University of Florida and surrounding community participated in 3 studies that employed transfer and similarity-matching tasks to investigate the relationship between contextual variability in practice and a training group given contextual variability in practice was more likely to solve transfer problems accurately and recognize principles embedded in novel problems compared to controls. In addition, solvers who did not receive contextual variability in training but solved a simple transfer problem showed improved transfer skills and recognition of embedded principles, was believed that variation across surface features in problems de-emphasized utility in problems used to categorize problems and to solve the problems.

Davis (2004) found the impact of life skills training program on the behavioral and cognitive factors of psychological well-being of Black and White college students. The participants in the program were 376 Black and White college students. Each participant got the training of life skills for twenty sessions in a month and completed the college Self-Expression Scale. The Self-perception Profile for college students and College Adjustment Scale. The four domains of Self-perception Profile for the college students were included in the data analysis i.e. Scholastic Competence, Physical Appearance, Social Acceptance, and Global Self-worth. Psychological well being was measured as Anxiety and Depression with the use of College Adjustment Scales. Cultural differences were evident in levels of assertion as reported by Black and White college students, as Black Students were scoring higher than white students on the Assertiveness Scale. The data revealed cultural differences regarding associations with assertiveness and self-concepts to the amount of anxiety and depression experienced by the Students. According to data inferior global and scholastic self-concepts among white college students were significantly associated with higher levels of anxiety and depression. The issue for Black college students was identified as social acceptance, which held a significant negative association with anxiety and
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depression. However there was improvement in the self-concept, depression and anxiety levels of students with training program.

**Shangold (2004)** conducted a study of life skills training program for youth of high schools of Mississippi. The program was provided to 530 high school students. The life skills training program included training of coping skills, social skills and behavioural skills. The results revealed significant development in coping skills for anxiety and depression; interpersonal and cooperative skills; and hostility skills.

**Kulikov (2005)** in a study found the impact of competitive youth sport participation on the social skills and competitive skills development. The sport chosen for the study was swimming and a qualitative case study was employed. The objectives like achievement values; achievement domains; achievement goal orientation; social learning; and competition spirit. The participants reported that sport was a unique vehicle through which children could engage in positive social learning experiences which would result in the development of positive character attributes and transferable life skills. In addition, it emerged that parents believed that sport was very helpful for the development of goal orientation; achievement motivation; social learning and competition spirit among their children and they also demonstrated good parent-child behaviour.

**Phelps (2005)** compared self-reported perceptions of personal and leadership life skills development of Louisiana High School 4-H leadership activity participants. The target population for this study was all high school students who participated in either the Character Counts (CC) peer-teaching program or the 4-H Junior Leader Club (JLC). A survey instrument was mailed to 321 high school students with 165 surveys returned. Results showed that no difference existed in the perceived personal and leadership life skills development among the three groups on the Leadership and Personal Development Inventory (LPDI).

**Moeller (2005)** investigator Victor Moeller contended that authentic learning begins only when teachers challenge students with real questions that demand solutions. Here, he aimed to help teachers of the next generation develop
various life skills i.e. skill of critical thinking, self awareness skill and practical skills. Moeller believed that anyone can acquire a life-long education from these skills.

**Sterling (2006)** explored the influence of a life skills course on athletic identity and career decision self-efficacy of collegiate student athletes. The study utilized a pretest-posttest control group design. The significant differences were found between the treatment and control sports groups on career decision self-efficacy and athletic identity. The results also indicated that an alarmingly high percent of student athletes anticipate a professional sports career. The unrealistic plan may lead to athletic career termination difficulties. This led to need of an extra training hour to the life skills course, which would allow for a career development component.

**Kaur (2006)** studied the effect of assertive communication training programme on teaching skills in relation to self-esteem and locus of control among pupil teachers. The subjects were 129 pupil teachers from two streams i.e. humanities and science. The results of the study showed that the use of assertive communication training enhanced the teaching skills of pupil teachers. It is thus an effective instructional strategy for teacher trainees. Standardized tools were used to measure the assertive behaviour of the students. Assertive behavior training enhanced assertiveness and it will ultimately enhanced self-esteem of pupil teachers. The study also shows that assertiveness training programme would be equally effective for the training of personality traits which are important for the teaching faculty.

**Grover (2006)** investigated a study entitled impact of teacher monitored on-line instructional programme on various life skills and academic stress of secondary school students. The main objective of the study was to study the impact of teacher monitored on-line instruction; on-line instruction without teacher monitoring and conventional instructional method on life skills and academic stress. The sample was 133 students of class IX from co-educational English medium schools. The study was investigated with the help of pre-post experimental design. The control group was taught through conventional
method and experimental group was given treatment. After the experiment, results showed that students taught through on-line instructional package scored higher in various life skills i.e. skill of problem solving, creative thinking, social skills, acquiring knowledge, communication and decision making, than the students who taught through conventional group learning. It further showed that Students studying through on-line instruction with teaching monitoring, on-line instruction without teacher monitoring and conventional group learning scored almost equal gain scores on academic stress. The students of three groups perceived equal academic stress. The results of the present investigation indicated that on-line instructional technology may be used to enhance the performance of the students in the Science subject at the secondary level as compared to the traditional method of teaching. Further it was suggested that while teaching students through on-line teacher monitored instructions, control, self-pacing and flexibility are the major advantages offered to the learners which lead to propose that such a strategy is more effective than traditional models.

Malhotra (2006) investigated the impact of quality instruction with home based remediation and parental involvement on life skills of fifth graders. The main objective was to study the impact of quality instruction with and without home based remediation on life skills of primary school children. Total sample chosen was 110 fifth graders students, 55 each in two experimentation group. Descriptive statistics with various tests and 2x3 ANOVA were employed on gain scores of various life skills to study the parental involvement and instructional strategy. It was concluded from the study that high parental involvement resulted in to higher gain scores for class V students. Quality instruction model has a positive impact on students with high parental involvement. Further it was stated that life skills were developed with the application of specific strategy. It was also concluded that quality instruction with home based remediation may be use to enhance the performance of the students on various life skills. It provided the common platform where school and parents could be brought together to enhance various life skills of the students.
Gafoor and Shemi (2007) found Impact of study skills training on achievement in biology of standard VIII students. The results of the study showed positive results in favour of using study skills in the subject of biology. The major objective of the study was to test the effect of study skills training on the achievement in biology of standard VIII students. The sample was standard VIII total 128 students. 64 students formed experimental group and the same number formed control group. There was a marked effect on Achievement in Biology in study skills trained group as a result of study skills training in the total sample. The same result was obtained from the analysis of sub samples based on gender and levels of achievement. The percentage of mean post test scores of study skills trained group and control group in total sample and subsample, 10-18 percent of increase in the achievement in Biology of standard VIII students was observed. Students and teachers highly appreciated the effectiveness of study skills training in improving the learning skills. It was very useful in enhancing achievement as its effect is highest in low achievement strata, though high achievers and average achievers also are supported by it in improving their learning skills. The findings suggested that study skills were positively related to academic achievement. The development of study skills will remain important in advancing student’s academic, personal and professional success. By providing proper assistance and guidance, low achievers and average achievers can improve their academic performance. In the teaching process, if teachers took responsibility of equipping students with important study skills, students would become independent learners to a great extent. At least a few hours in every term should be set apart to develop newer techniques and skills which will make the learners better in learning and achieving.

Zollinger and Cummings (2007) investigated the impact of the life skills training curriculum on middle school students’ tobacco use in Marion County. This Study was conducted on evaluation of school-based tobacco prevention and control programs have yielded mixed results. This study assessed the impact of the Life Skills Training curriculum on Marion County, Ind., middle school students' knowledge, attitudes, and ability to make good lifestyle decisions. From
1997 to 2000, students in grades six to eight in the study schools received the Life Skills Training curriculum. Survey data (n = 1,598) were used to compare tobacco use behavior, attitudes, and knowledge of those exposed with those not exposed to the program. Of the students surveyed, 12.5% were currently smoking. There were significantly fewer current smokers, and more students exposed to the program indicated they intended to stay smoke-free. Fewer of those participating in the program hung out with smokers and more said they could easily refuse a cigarette if offered one. Students completing the Life Skills Training curriculum were more knowledgeable about the health effects of smoking. Program effects were different for male and female students as well as for White and Black students.

Zimmer (2008) concluded in a case study that project based learning (PBL) in 12th grade social studies classrooms contributed to the development of life skills for high school seniors in this advanced and globalized time. This research was investigated student experiences with PBL methods for helping them acquire skills along with a case study of a successful PBL program. The purpose of this study was to help educators discern the value of this instructional strategy. A qualitative approach to gathering research, using the interview format was conducted with three teachers who agreed to participate in the study. These teachers had created a unique PBL program in their high school classrooms. The focus of their work was to document the success in teaching life skills to high school students with the goal of preparing them for college, jobs, and life after secondary education. Information was also gathered by observing the teachers as they were involved in working actively with students using PBL. The major themes found within the literature highlight the success of the project based learning method, the importance of skill building for life and that fundamental changes were needed for education and instruction. It was concluded that the PBL method was successful in teaching and building life skills in high school social studies classrooms, and able to better prepare students for life after secondary education.
Scott and Jenifer (2009) studied a different type of success: teaching important life skills through project based learning. This study focused that US high schools appear to measure success according to the number of students admitted into four-year institutions each year. Although this was one measure, there were some schools that focused on developing important life skills needed to become productive members of society. Online surveys were sent out to alumni, students, teachers, and parents to a student-centered charter school in Minnesota to explore definitions of success and determine if this school teaches life skills. One hundred and forty-seven surveys were collected from these four groups. Life skills such as creativity (94%) and ability to find information (92%) were ranked much higher than academic skills such as test taking (33%) and note taking (39%). Academic skills ranked low, yet 50 percent of the alumni polled graduated from college, which is considerably higher than the national average (39%). To further enhance the learning at project based learning schools, educators should provide opportunities for students to practice academic skills such as note taking and test taking so that students who plan to attend college will be better prepared. The research in this study showed that this school was excellent at teaching important life skills that help students succeed in college and in life in general.

Emeka (2009) examined the use of music to teach life skills to students with emotional disabilities in the classroom discussed the teaching of life skills to urban American youths who were highly fascinated with the hip-hop culture--songs, raps, miming, lyrics, dressing and musical rhythms, especially individuals with emotional disabilities in the public schools. It was an instructional curriculum strategy to encourage positive and active participation of these students, promote perfect school attendance, encourage good behaviors, deal with anger management and motivate committed learning in the classroom. The instructors' understanding of students' culture, learning needs and styles, and using such background knowledge to educate them become imperative in this setting. These urge for innovative and leadership projects in the author's special education classroom necessitated the application of hip-hop music to teach life skills,
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reading and other functional skills in the classroom. The outcome was positive and rewarding to both the teachers and students. There were recommendations for interested teachers to devise creative teaching methods, differentiated instruction and appropriate classroom management practices to attain student achievement.

Kopp and Gillberg (2010) examined developmental co-ordination disorder and other motor control problems in girls. It was stated that the rate, predictors, and effect on daily life skills of developmental coordination disorder (DCD) and other motor control difficulties in school age girls with autism spectrum disorder (ASD) and/or attention-deficit/hyperactivity disorder (ADHD), in preschool age girls with ASD referred to a neuropsychiatric clinic, and in a community sample of school age girls. The girls (131 in total) were examined with standardized test of motor function and parent interviews and questionnaires. The school girls were compared with 57 age-and IQ-matched girls from the community. DCD was diagnosed in 25% of clinic school girls with ASD, in 32% of those with ADHD, and in 80% of the clinic preschool girls with ASD. Parents reported more motor problems in the school age clinic group. Agreement between a brief motor screening test and a full comprehensive motor examination was moderate to good in the clinic group. Young age, autistic symptomatology, and low performance IQ predicted more motor coordination problems. Motor coordination problems were related to lower ability in daily life skills even when the effect of PIQ was controlled for. A large minority of school girls with ASD and/or ADHD, and a majority of preschool girls with ASD meet full diagnostic criteria for DCD. Their motor problems contributed to reduced activity in daily life even when the effects of IQ have been partialled out.

Kalanda (2010) investigated a study entitled life skills and reproductive higher changes behavior in students and teachers. To address early drop out of school, drug abuse and contracting sexually transmitted diseases including HIV, the Malawi Government introduced Life Skills and Sexual and Reproductive Health (LS/SRH) education. The objective of LS/SRH was to empower pupils and their teachers with life skills for HIV prevention, sex and sexuality issues. This study evaluated the current levels of knowledge of LS/SRH in primary school

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pupils and secondary school students after the introduction of LS/SRH. It also investigated reported behaviour changes in pupils, students and teachers due to LS/SRH. Implementation challenges of LS/SRH were also investigated. Knowledge of LS/SRH is low amongst primary school pupils and it is slightly higher amongst secondary school students. LS/SRH has also led to behaviour changes amongst pupils, students and teachers. Lack of teaching materials, poor orientation of teachers on LS/SRH, and teaching time are the major challenges affecting the teaching of LS/SRH. In the light of high HIV prevalence among young people in Malawi, the government should continue to support LS/SRH in primary and secondary schools. LS/SRH should be made examinable to encourage both students and teachers to take it seriously. More resources should be provided to create an enabling environment for teaching LS/SRH.

Vallotton and Ayoub (2011) investigated study entitled the role of gestures and words in the development of life skills and social-emotional concepts during toddlerhood. Social skills and symbol skills were positively associated in middle childhood, but the relation between these domains was less clear in newly verbal toddlers. It was proposed that symbols were both tools for interaction and mental tools for thought. Longitudinal data from 108 children and mothers were collected when children were 14, 24, and 36 months. Children's gestures and words during mother-child interactions were used as symbol skill indicators to predict children's abilities to engage others and the number of social-emotional concepts children portray during play. In a series of growth models, words had a stronger effect on life skills whereas early gesture use predicted later development of social-emotional concepts. Therefore, even in early development, symbols serve as both communication tools and mental tools to construct understanding of the social-emotional world

Ozaeta (2011) explored the impact of the Teaching Personal and Social Responsibility Model (TPSR) in teaching life skills. TPRS was used in this study to examine the degree of transference of the four primary TPSR goals from a Coaching Club program to the participants' school environment. Thirteen African American and Pacific Islander students (11 boys and 2 girls) at an underserved urban K-5 elementary school were taken. Adult participants included two classroom teachers
and the extended day program director. The Coaching Club used team sports as a vehicle for teaching life skills and promoting transference. The program took place once a week for two consecutive years (45 sessions), and adhered to TPSR format and strategies. An interpretivist/constructivist approach to program evaluation was used. Multiple qualitative data sources were used to understand experiences, perceptions, and individualized outcomes associated with the program. This study provided sufficient evidence from both youth participants and adult participants to support transference of the four primary TPSR goals to the school environment. It was concluded that establishing meaningful pedagogical relationships was a cornerstone in youth development programs. TPSR cultivated a positive environment that created self-growth and concern for others. In this regard, TPSR was representative of the broader field of youth development.

2.3: RESEARCH STUDIES RELATED TO PERSONAL VALUES:

Theodore (1986) attempted to investigate the attitudes held by students and faculty members at the University of South Alabama towards values and value education on 201 students and 105 faculty members. The findings revealed that students and faculty members at the University of South Alabama do hold certain types of values to be important. They also feel that there have been changes in the traditional values held in American Society and that these changes are negative.

Coyle (1986) conducted a study to investigate the relationships among pupil control ideology, value orientation and organizational climate in elementary schools on 75 schools in Alabama, Louisiana and Mississippi. The results revealed that a significant relationship was found between pupil control, ideology and traditionalism in values. No significant interaction was found between value orientation and openness of climate as they relate to pupil control ideology.

Craig (1988) conducted a study to find the use of a school values model in three intermediate schools in Hawaii and tested for variation in student values according to the level of student sentiments toward school on 353 students, 11 social studies teachers and 3 principals. The result revealed that a positive relationship of moderate strength was found between the values of the school as described by the model and the values of the students.
Gupta (1989) undertook a study of the values and moral judgment of adolescents of two representative centers of western and eastern U.P. The sample of 80 boys and 80 girls each, was taken both from western and eastern U.P. It was found that the regional differences influenced the different personal values of the adolescents in an important way.

Srivastava (1990) undertook a study of value patterning and self-esteem of deprived and non-deprived boys and girls. 200 deprived and 200 non-deprived students of both sexes were randomly selected from Agra city. It was found that deprived and non-deprived groups differed in value-patterns. Boys and girls also differed in values.

Padmanabhan (1992) studied the values of high school pupils in relation to certain selected variables. A sample of 1000 students of IX std. of secondary school was drawn. It was found that the rank order of the value of the mean scores for the different values, showed the highest score in social value, and lower score in political value. Boys and girls differed to theoretical, economic, political, social and aesthetic values.

Reddy (1992) undertook a study of variation in the development of moral judgment of school students in different types of schools in relation to general intelligence, personal values, socio-economic status and sex. The sample of the study comprised of 2642 students studying in classes V, VII and IX, Who were selected from 14 secondary schools of Puri District. It was found that (1) the class VII and class IX students studying in privately-managed schools scored significantly higher in moral judgment than their government school counterparts. (2) The urban school students of all the classes exhibited significantly higher moral values than the rural school students. (3) The girls exhibited significantly higher moral judgment than the boys.

Pradhan (1993) studied values among secondary school students in relation to moral judgment, socio-economic status and sex. The sample consisted of 196 students of which 89 were girls and 107 were boys. It was found that (1) socioeconomic status was significantly (positively) correlated with social, economic, knowledge, power and family prestige -values whereas it has no
significant correlation with religious, democratic, aesthetic, hedonistic and health values. (2) Moral judgment was significantly (positively) correlated with religious, democratic, social knowledge and health values. Moral judgment was significantly (negatively) correlated with economic, hedonistic, power and family prestige values. Boys and girls differ significantly in social, democratic, power and health values. They do not differ significantly in other values.

Verma (1993) studied value orientation of socially disadvantaged adolescents. The sample of the study consisted of 85 socially advantaged and 55 socially disadvantaged adolescent students studying in XII class. The results yielded that socially advantaged adolescents were significantly higher on social and religious values than socially disadvantaged students. But no significant difference was found in theoretical, economic, aesthetic and political values of socially advantaged and socially disadvantaged students.

Padhan (1994) studied moral values of school students in relation to different personal values. The sample of the study consisted of 561 students of class IX studying in 14 different secondary schools. The results indicated that moral judgment was significantly (positively) correlated with religious, social, democratic, knowledge and health values but negatively (significantly) correlated with economic, hedonistic, power and family prestige values. However no significant correlation has been found between moral judgment and aesthetic value.

Verma (1995) studied the value pattern among college youth of Rohilkhand region with special reference to sense of responsibility. The total sample of 400 students of Part-I belonging to Arts, Science and Commerce of Rohilkhand region were taken. It was found that (1) social values were found highest among Arts stream, theoretical values among Science stream and Commerce stream and Aesthetic values the lowest in all the three streams. (2) On Economic values Commerce and Science students differ significantly. (3) The Arts, Science and Commerce stream did not differ significantly on their sense of responsibility.
**Liesa (1997)** investigated a study of empathy, perspective taking and personal values as predictors of moral schemas. The aim of this study was to clarify the relationships between empathy variables, personal values and moral reasoning. The impact of empathic concern, perspective taking and personal values measured by the Portrait Value Questionnaire on moral schemas measured by the Defining Issues Test was investigated among 599 students from a university of applied sciences. The results revealed that perspective taking contributed to the post-conventional schema, even after values were added on the hierarchical regression model, and that the personal interest schema was predicted by both individualist values (hedonism) and collectivist values (benevolence and tradition). Conformity and security predicted positively the maintaining norms schema whereas universalism and self-direction served as negative predictors for the maintaining norms schema but positive predictors of the post-conventional schema.

**Petra and Metthewas (1998)** conducted a study entitled the effects of college students' personal values on changes in learning approaches. This study employed multilevel modeling as a more appropriate technique for the analysis of longitudinal data to examine factors influencing changes in the learning approaches of 153 international undergraduate students over a 3-year period. Specifically, using hierarchical linear modeling (HLM), the effects of personal values (level-2) on learning approaches and changes in them over time (level-1) were examined. Results showed no changes within students in the deep and surface approaches to learning but a significant decline for the achieving approach, particularly for students who previously experienced a more formal teaching authority. Furthermore, students' personal values in terms of security, achievement and hedonism affected the achieving approach while no effects emerged for the personal values of tradition, conformism, universalism, self-direction and stimulation. Finally, these effects can be observed while no significant effects emerge for gender, discipline and ability.

**Bajpai (1999)** undertook a study of values of tribal and non-tribal adolescent students. The study was conducted on 498 tribal and 375 non-tribal
students. The study revealed that tribal and non tribal adolescents have significant difference in four values: theoretical, aesthetic, social and religious. On the other hand boys and girls students have significant difference in some values.

Ursinah (2000) undertook a study entitled change and persistence of personal values after the transition to retirement. This study addresses the question of how retired people's self-image and personal values differs from that of working people, and what factors predict people's self-definition as professionals or retirees. Seven hundred ninety-two Swiss persons aged 58-70 (386 men, 406 women; 349 not retired, 443 retired) were asked to rate the importance of different self-description domains (such as profession, family-roles, personal values, etc.). Results indicated that the profession domain remains important for self-description even after retirement, to the extent that retirement status does not predict the importance of the professional identity at all. Rather, consistent with social identity theory, the importance of the profession for self-description was best predicted by the status of the (former or current) job. The importance of the retirement status for self-definition was predicted best by a positive attitude toward aging. In general, retired respondents rated more domains of self-description as important as did not-yet-retired respondents, and no domain was less important after retirement. In other words, identity diversity was higher for the retired than for the not-yet-retired persons. In addition, high identity diversity correlated with a high satisfactory across different life domains.

Shailaja and Saboji (2002) undertook a survey of values among the teacher educators (with special reference to sex, marital status and teaching experience). A sample of 800 teacher educators was categorized into different sub-groups based on their gender, marital status and teaching experience. It was found that the values of female teacher educators differed from that of male teacher educators.

Bar and Singh (2004) undertook a study of values of teacher trainees (with special reference to sex and locale). The sample consisted of 200 teacher trainees of educational colleges of Panjab University, Chandigarh. The results of the study showed that male and female teacher trainees differed significantly in
Aesthetic, hedonistic and power values, whereas rural and urban teacher differed significantly in economic and family prestige value.

**Gnanadevan (2005)** studied the attitude of higher secondary students towards morality in relation to certain selected variables. A random sample of 1000 higher secondary students was taken. It was found that (1) boys and girls differed significantly in their attitude towards morality. Girls have more favourable attitude towards morality than boys. (2) Higher secondary students studying in private and government schools do not differ significantly in their attitude towards morality.

**Armstrong (2006)** conducted research on the significance of personal values in integration of self awareness for secondary school students in selecting proper career. The major findings of this study were that the knowledge of one's personal values, goals, skills, interests, and personality is fundamental to any wise career choice. Whether selecting courses for a semester, choosing a major, or deciding on a career path, self awareness is critical.

**Erica and Liben (2007)** explored in a study entitled gender, personal values, and occupational interests among children, adolescents, and adults that work fulfilled personal values, perhaps differently for males and females. Explored here was the role values play in shaping occupational interests. Study 1 examined children's, adolescents', and adults' (N = 313) occupational values (regarding money, power, family, altruism), occupational interests, and perceptions of values afforded by traditionally masculine and feminine occupations. Results revealed sex differences in occupational values and interests. Furthermore, participants' values predicted their own interests in culturally masculine and feminine occupations. Study 2 used novel jobs and experimentally manipulated prototypical sex of worker and value affordances to disentangle their effects on occupational interests. At all ages, participants' (N = 240) occupational interests were affected by the depicted sex of the workers and by the stated values affordances of the jobs.

**Beglay and Olof (2007)** investigated the personal values of school administration: preferences, ethics, and conflicts. The findings of two studies
focused on the personal and professional values of school administrators. Two themes were employed as general organizers for the research: the influence of personal preference and trans-rational principles on the problem solving actions of school administrators and the value conflicts that administrators experience in their work. One study was conducted in Umea (Sweden), the other in Toronto (Canada). The conceptual framework integrated Hodgkinson’s (1991) values theory with information processing theory. Action research methods were adopted as a way of overcoming the special problems associated with conducting research on values. Findings suggested that administrators’ personal values were significant influenced on problem solving. Specifically, the rational value types of consensus and consequences predominated in the valuation processes of school principals, personal preferences were infrequently articulated, and trans-rational principles were employed under particular circumstances.

**Ahuja (2008)** studied preferences of teachers on personal values according to their experience and subject area. The study was conducted on 431 teachers including pre-service and in-service teachers. Pre-service teachers’ sample (N=144) with no teaching experience was selected from Colleges of education. 145 in-service-confirmed teachers who had more than 5 years of teaching experience, were taken from the Govt. Senior Secondary Schools of Chandigarh, In-service teachers (N=142) who were not confirmed but had 1 to 5 years of teaching experience, were taken up from the Govt. Senior Secondary Schools. Both male and female teachers were selected. Each category of teachers included teachers from Languages, Natural Sciences and Social Science. Preferences on personal values of each teacher were collected on The Value Survey Form: Personal (developed and validated by Pal 1995). Coefficients of concordance, and X2 revealed that SINCERITY was the highest preferred value while the AESTHETIC was the least preferred value for all the three groups of teachers.

**David (2009)** examined the study personal values and performance in teams: an individual and team-level analysis. It included two studies involving 107 undergraduate and 54 MBA teams were conducted to examine the effects of
personal values on the performance of individual team members and on the performance of the team as a whole. Values with clear relevance to teams and to work were selected for the studies. To capture the relative importance of these values, they were measured within the context of a broader set of personal values. At the individual level, the importance students ascribed a sense of accomplishment had a significant, but unexpected negative, relationship with individual peer-evaluated performance. Students’ prior performance outside their teams had a stronger positive relationship with in-team performance than did their personal values. At the team level, the average importance team members assigned the value of equality had a positive relationship with team performance. The average level of students’ prior performance was also related to team performance, but the average importance given to the equality and honesty were the stronger predictors of this fundamental team outcome.

Ferran (2010) examined in the study recursive processes in self-affirmation: Intervening to close the minority achievement gap, whether having African-American middle school students write essays affirming their personal values improved their academic performance. The study analyzed data on about 175 African-American and 190 European-American students (the study's term for white students who are non-Latino and non-Asian) at a suburban middle school who was randomly assigned to intervention and comparison groups at the beginning of seventh grade. The study measured effects by comparing the seventh- and eighth-grade GPAs of students in the intervention and comparison groups. These GPAs included grades from the four core academic subjects: science, social studies, math, and English. The study examined effects separately for European-American and African-American students and for low- and high-achieving students. Among African-American students, completing writing exercises about their values increased their average seventh- and eighth-grade GPA by a quarter of a letter grade (0.24 points), a change that was statistically significant. The intervention did not have a statistically significant effect on the academic outcomes of European-American students. Among low-achieving African-American students, the effect was somewhat larger, an increase in average
seventh- and eighth-grade GPA of 0.41 points. In addition, the intervention reduced the likelihood that low achieving African-American students were assigned to a remedial program or were retained in grade. The research described in this article is consistent with WWC evidence standards. This study was a well-implemented randomized controlled trial.

**Hiroyuki (2010)** in the study entitled *Japanese children's reasoning about conflicts with parents in relation to their personal values* found that personal values has an effective role in the settlement of routine conflicts. Ninety-five Japanese children (aged 6-12) were interviewed using hypothetical stories to examine their reasoning about parent-child conflicts. Participants were most likely to reject parental authority and to support child's discretion in conflict situations where the parent interfered in the child's personal choice and gave the child commands that violated moral and conventional principles. However, participants were most likely to accept parental authority when the child's wish conflicted with the parent's moral concern and related to some values. Participants' reasoning was more varied when the child's wish went against the parent's conventional demand. Consistent with their cultural values, participants considered harmonious relationships in evaluating conventional and personal conflicts, but not moral conflicts. Age differences were observed in the endorsement of personal choice. Results suggested that children do not simply act upon their cultural values but also show resistance to parental authority for reasons beyond meeting selfish needs due to the presence of personal values and form differentiated judgments about parent-child conflicts.

**Frick (2011)** conducted a research to explore the inevitable internal struggle experienced by school leaders when making ethically-informed judgments. The study acquired principals' intimate reflections about professional decision making in response to personal versus organizational and/or professional value discrepancy as identified in the ethic of the profession and its model for promoting students' best interests. Findings of the study suggested that a clash between personal beliefs and values and organizational/professional expectations was very real for participants. The experience was generally frequent, but varied
among principals. The struggle can be characterized as a phenomenon of intrapersonal moral discord experienced as part of the process of deciding ethically when faced with difficult moral choices.

**Mark and Fisher (2011)** conducted a study entitled personal values and teaching practice in relation to conceptions of assessment. This study examined the values and practice in relation to assessment of a sample of 220 trainee teachers studying for a Postgraduate Certificate in Education, an initial teacher training and education (ITET) course, at the University of Cambridge, UK. The survey instrument was drawn and was composed of questionnaire items that sought to elicit how trainees valued different classroom assessment practices and the extent to which their own teaching complied with such values. Item and factor analyses revealed three dimensions that underpin trainees' classroom practice and values (promoting learning autonomy, performance orientation, making learning explicit). Values-practice gaps were greatest on promoting learning autonomy and performance orientation. Trainees valued practices associated with the former more than they implemented them in their teaching, while they implemented practices associated with the latter more than predicted by their values. Values-practice gaps suggested that trainees were constrained from implementing their values to a greater extent than qualified teachers, particularly with respect to these two factors.

### 2.4: RESEARCH STUDIES RELATED TO PSYCHOLOGICAL HARDINESS:

**Laura and Hammond (1985)** investigated a study entitled mediators of stress and role satisfaction in multiple role women. The purpose of this study was to examine role and life satisfaction and stress in women involved in multiple life roles and, using an interactional theory of stress as a guideline, to explore the mediating effects of coping strategies, psychological hardiness, and social support on these levels of stress and satisfaction. The sample included 104 female university faculty, research scientists, and administrators involved in multiple role lifestyles. Participants completed questionnaires assessing their levels of stress; general life, career, marital, parental, and leisure role satisfaction; hardiness; social
support; and typical coping strategies. Participants reported relatively low levels of stress and moderately high levels of satisfaction with their roles. Regression analyses revealed that the various forms of satisfaction were significantly predicted by hardiness and social support. Coping strategies were not a strong predictor for any of the satisfaction variables. Stress was significantly related to lack of hardiness and use of avoidance coping strategies for women. These results were highly significant at both the levels to show that varied variables were correlated to the one segment of psychological aspect of the personality.

Bartone (1987) investigated the impact of a military air disaster on the health of family assistance workers in relation to their psychological hardiness. On December 12, 1985, a charter airline carrying 248 United States soldiers crashed and burned after a refueling stop in Gander, Newfoundland, killing all on board. After the crash, family assistance workers were appointed to help the surviving family members of each dead soldier. This study attempted to: (1) identify the major areas of stress for disaster family assistance workers; (2) examine the relation between exposure to these stressors and health; and (3) locate risk factors, or resistance resources that might moderate ill effects of exposure in relation to their psychological hardiness. A survey instrument assessed duration and intensity of family helping activities, illness indicators, psychiatric symptoms, psychological well-being, and social and personality variables at 6 months after the crash and again at the 1-year point for 131 family assistance officers. The results indicated a dose-response effect between exposure measured at Time 1 and illness levels at Time 2, an increase in symptoms, and a change in psychological well-being over time. Social support was a moderator of the exposure-symptoms relation, and both social support and psychological hardiness were moderators with respect to Time 2 illness and change in psychological well-being. Other evidence suggests that prior experience with death and grief, and having volunteered for the family helper role also reduced the risk of developing ill effects.

Carter and Campbell (1988) examined a study entitled stress in the work environment: an examination of social support and hardiness. This study explored
the effects on stress of an individual's social support and hardiness in a work environment. Subjects were 90 employees of an industrial firm and 50 undergraduate students who worked part-time. Sixty-eight subjects (49%) completed useable questionnaires measuring stress, perceived stress, social support, and hardiness. Results showed that, for subjects receiving low levels of social support, an increase in work stress was associated with increased perceptions of stress. However, for subjects receiving high levels of social support, increasing work stress was not associated with notable increases in perceived stress. Results of this research support the theoretical concept that social support can moderate stress effects. Managers are in a position to encourage or prevent the development of social support on the job.

Tang and Hammontree (1989) studied the effects of psychological hardiness, job-related stress, and life stress on health and absence from work. In this study, hardiness in a sample of police officers was examined. Subjects (N=60) were police officers from seven suburban police departments who completed a questionnaire which measured life stress, police stress, strain, illness, absence from work, and hardiness. Six months later all variables except hardiness were measured again. The results of hierarchical regression analyses indicated that hardy police officers had less concurrent strain, future strain, concurrent illness, and future illness. Police officers who had high police stress tended to have a high level of future illness and future absence from work. Further, the interaction between hardiness and police stress on future absence from work was significant. Thus, hardy police officers with a high level of police stress tended to have a higher level of absence from work than hardy officers with a low level of police stress, while non hardy police officers experienced a high level of absence from work regardless of their job related stress.

Samuel and Kevin (1990) concluded from a study entitled hopelessness and hardiness: a strained relationship. In this study it was stated that most researchers recognize a moderate but reliable relationship between stress and illness. This study was conducted to examine the possible relationships among hardiness, hopelessness, and strain. Undergraduate students (N=305) completed a
questionnaire packet consisting of the Hopelessness Scale, a version of the hardness Scale, and a checklist of strain symptoms. Significant correlations were found among hopelessness, hardness, and strain. Hopelessness was negatively correlated with the hardness composite and with each of the three hardness subcomponents. Strain was negatively correlated with hardness and positively correlated with hopelessness. While hopelessness and hardness were moderately correlated, they each accounted for unique portions of the variance in strain scores.

James (1990) examined the differences between type A and B individuals on hardness. It was found in this study that psychological hardness is an effective measure of stress resistance. This study examined the differences between type A and B individuals and their hardness. Although it was thought to be an independent risk factor for coronary heart disease, the role of type A behavior in other disease processes or general health had not been established because type A had been hypothesized to be a maladaptive coping strategy against stress, one might expect the behavior pattern to act as an augmenting stress-moderating variable. To test this hypothesis, two self-report measures were administered to the 150 participants in the sample. The Jenkins Activity Survey (JAS) was used for assessing type A and B behavioral patterns among participants and the hardness questionnaire was used to determine those participants with hardy personalities who seem especially stress-resistant. There were 74 type A personalities and 76 type B personalities in the sample. A multivariate analysis was conducted to examine how type A personalities differed from type B personalities on hardness and the three subscales of the hardness questionnaire, which are commitment, control and challenge. Results indicated that type A individuals had significantly higher hardness scores than type B individuals. Further analysis revealed significant differences between type A and B individuals on the hardness questionnaire subscale of commitment.

Smith (1990) reported significant ethnicity difference in hardness, socio-economic status, life satisfaction and cognition among adults. Further hardness was found to be the most important predictor of life satisfaction along with
perceived health concerns and life satisfaction was found to be mediated by health concerns relationship with hardiness.

**Greene and Nowack (1991)** examined a study entitled *psychological hardiness and health status: correlates of stress*. This research has suggested that individual differences in the personality measure of hardiness were related to health status. This study with full-time employees (N=229) investigated the association between stress, two separate measures of personality psychological hardiness, and objective (stress due to illness verified from personnel records) and subjective (self-reported hospitalization due to injury/illness and psychological well-being) health measures. Using stepwise multiple regression analysis, stress, but not hardiness, significantly predicted irregularity when controlling for relevant demographic variables. Stress and the alternative measure of hardiness also significantly predicted psychological well-being. Finally, the alternative measure of hardiness, but not any of the original personality hardiness scales, predicted self-reported hospitalization for injury/illness over the 3-year period. Little evidence for the predictive validity of the Kobasa personality hardiness scales or overall hardiness score existed with either objective or subjective health outcomes in this study. However, the alternate measure of hardiness, but not the original hardiness scales, was significantly associated with well-being in this prospective study. These findings suggest that the current conceptualization and measurement of the original hardiness construct should be re-evaluated.

**Gill and Harris (1991)** explored a study entitled *hardiness and social support as predictors of psychological discomfort in mothers of children with autism*. This study was related to the mothers of 60 children (ages 2-18) with autism found that mothers who perceived social support as more available experienced fewer stress-related somatic problems and depressive symptoms than did those with less perceived support. Analysis also indicated that psychological hardiness was a predictor of both depressive symptoms and somatic complaints.

**Sheppered and Kashani (1991)** explored the relationship of hardiness components of commitment, control and challenge with experience of physical and psychological symptoms in a sample of 150 adolescents. The results of the study
indicated that adolescents high in either commitment or control experience fewer somatic problems than their counterparts. Further, the hardiness components of commitment and control were found to predict actual physical health outcomes for males and not for females.

Collins (1992) conducted a study entitled hardiness as a stress resistance resource. Study revealed that one of the most important stress resistance resources emerging from research in adults has been the hardy personality. Identification of such a personality characteristic in young adults would provide some understanding of how some individuals emerge from a period of instability and change with the life skills that help them adapt in a variety of social situations. Therefore, this study was designed to assess the effects of stress and hardiness in an adolescent population. Following a factor analytic approach, a reliable hardiness scale for adolescents was constructed and administered to a sample of inner city youth (ages 11-16, N=223). Empirical support for looking at hardiness as a stress resistance resource was found. Hardiness acted as a buffer, moderating the effects of stress for drug use, and was directly influential in the prediction of aberrant behavior (rebelliousness, socially deviant attitudes, and repression) and affective reactions (depression and family discord). However, gender was also identified as an important variable for predicting behavioral adjustment. The negative relationship between sex and behavioral adjustment indicated a tendency for males to report more socially deviant attitudes, rebelliousness, and repression than females. It was determined that social desirability, age, and sex should be important considerations when interpreting research findings or developing support programs for adolescents.

Younkin (1992) investigated a sample of psychology students and results of the study revealed significant relationship in a positive direction for both self esteem and autonomy and a significant negative relationship between hardiness and depression. Further, hardiness was found to have direct, not moderating, effects in the stress -illness relationship. The findings of the study indicated that hardiness is viable, important psychological construct.
Kosaka and Yoshida (1992) found that not all people experiencing psychological stress confused or lose their health. Many studies indicated that stress inducing events (stressor) explain only 9% for variance of health status. In 1992, many researchers looked for factors that mediate between psychological stress and health status, for example, social support, self-esteem, personality characteristics.

Castillo (1993) investigated a sample of 857 undergraduate students and reported that subjects high in hardiness and social support reported significantly more altruistic behaviours and family cohesion than their low hardy counterparts. Further, high hardy subjects exposed to failure condition reported significantly more confusion that high hardy subjects exposed to success condition due to the use of strategies for success.

Habit (1993) in a study on 101 adolescents reported that hardiness and family support exerted significant effects on psychological health. Further, a significant two way interaction between hardiness and family support was observed indicating that family support was observed indicating that family support was an important factor in protecting psychological health of low hardy young adolescents.

Parsons (1994) in a study on determinants of health status among college students found that there was negative and significant relationship between stress and hardiness. The regression analysis revealed that stress followed by hardiness emerged as significant predictors of health status among college students. Further low hardy students taught through specific instructional strategy reported high achievement and low level of stress as compares to low hardy students exposed to traditional teaching styles.

Benishek and Morrow (1995) studied the effect of positive coping strategies developed by survivors of childhood sexual abuse on their personality. Estimates of the study indicated that 1 in 4 women and 1 in 7 men have been sexually abused as children. These statistics may be underestimated based on anecdotal information relayed by many therapists who specialize in working with survivors of childhood sexual abuse. Effects of childhood sexual abuse have far
reaching implications for the survivors' abilities to cope with both everyday stressors and more intense life events. General models of personality and coping styles provided a useful framework for understanding and promoting successful coping in survivors of childhood sexual abuse. One personality style is hardiness. Hardy persons were thought to withstand difficult life situations using a combination of three cognitive appraisal processes: control, commitment, and challenges. Resilience, a second style, was characterized by the ability to move beyond hardships. Coping styles that promote or impede a person's ability to manage life circumstances were examined. Three common themes were: meaning/commitment, control, and challenge. Coping and resilience were covered, with a focus on gender differences.

**Rush (1995)** examined a study *Psychological Resiliency in the Public Sector: Hardiness and Pressure for Change*. In this study responses from 325 senior state government employees showed that pressure for change was linked to stress, dissatisfaction, and intention to leave. Psychological hardiness had a negative impact on stress and a positive impact on satisfaction. Hardiness may serve as a significant counterforce to the effects of pressure.

**Strang and Smith (1995)** in a study on 64 university students reported that hardiness scores at the beginning of semester were significantly positively correlated with primary and secondary appraisal as well as with problem focused coping and significantly negatively with avoidant coping. However results through instructional strategies related neither to hardiness scores nor to physical or psychological outcomes.

**Pengfly (1996)** reported that total hardiness as well as it is components along with social support satisfaction was significantly, negatively related to higher levels, of depression at average level of stress among college students. Further, social support satisfaction and only commitment components of hardiness were found to have moderating effect on stress.

**Kosaka (1996)** investigated a relationship between hardiness and psychological Stress response with 224 students of two universities of Tokyo, Japan. In this study, performance was defined as *Psychological response on*
stressful situations. The purpose of this study was to investigate the effect of hardiness to psychological stress response, confirmed the hypotheses of People high in hardiness express less psychological response on experiencing stressful situation. Further investigator found that there were no significant differences in each variable between colleges and genders. Reliability of each component of hardiness was in high level and inner-Correlation was moderately high. Data were collected twice to fulfill one of the conditions for confirming causal relationship. Few weeks before examination at the first semester were set as Time 1 and the days around three months after Time 1 was set as Time 2. At time 1, questionnaire of hardiness was distributed to all subjects. Questionnaire of psychological stress response was distributed at time 2. This study confirmed the relationship between hardiness at time 1 and psychological stress response (PSRS) at time 2. Total score and sub scores of PSRS were compared by 8 categories of hardiness (created by median split of commitment, control and challenge). Result indicated that (1) Three components of hardiness have adequate reliability and have moderate inter-correlation, (2) Total score and sub scores of PSRS were negatively correlated with three components of hardiness, (3) Some sub scores and total score of PSRS were highest in category that all components of hardiness are in high, and lowest in category that all components of hardiness are in low.

Hirky (1998) found that relationship between Hardiness and Stress was fully mediated through lower levels of latent construct measured by behavioral discouragement and devial coping. The path from Hardiness to coping was significant. Stress results from a biological dependency of social environments, people who exhibit characteristics of a hardy personal will better cope with that Stress.

Gerson (1998) in a study conducted on psychology graduate students found that high hardy subjects perceived stressors as a less stressful as their low hardy to more effective methods of coping. Hardiness along with cognitive avoidance and logical analysis of different instructional strategies emerged as significant predictor of stress among students.
Sansone et al. (1999) studied hardiness and consciousness as moderators of self-regulatory process when the individual had the option of quitting in addition to the option of persisting and of engaging in interest enhancing strategies on a sampling of 131 undergraduates. The results of the study indicated that hardiness reflected a productive approach to the amount of stress experienced in one’s environment that was independent of neuroticism or general environment negative affectively can have important self-regulatory effects.

Lifton, Seay and Andrew (2000) investigated a study entitled can student’s psychological hardiness serve as an indicator of likely persistence to graduation? In the study they discussed a longitudinal study that tests undergraduate students’ psychological hardiness (ability to thrive under stress) and their likelihood of advancing to sophomore year. Study gave a detailed definition of hardiness and its importance in retention in schools. Although the study was supported their hypothesis stated that psychological hardiness had an overall impact on the study habits and emotional maturity of students. It showed positive relationship between mental maturity and hardiness.

David (2000) explored a study entitled dimensionality of hardiness and its role in the stress-distress relationship among Chinese adolescents in Hong Kong. The three components of hardiness, life events, coping strategies, and psychological distress, were assessed in a sample of 245 Chinese secondary school students in Hong Kong. While commitment, control, and challenge were not clearly differentiable as distinct constructs, three dimensions interpretable as resigned acceptance, cynical concession, and pragmatic orientation emerged. In the stress-distress relationship, hardiness did not interact with stress to moderate its influence on distress; however, both hardiness and stress had independent main effects on distress. Although high hardy students, compared with low hardy students, did not appraise positive events as having greater impact, they perceived that negative events had significantly lesser impact. In addition, low hardy students reported using passive and avoidant coping strategies significantly more frequently than high hardy students. Teachers were also played dominant role by adopting instructional strategies which helped them in coping stress.
Pollachek (2001) remarked a significant relationship between hardiness and well being, social support and well-being. The results of stepwise multiple regression analysis showed that hardiness was the only variable that accounted for 28% of the variance in well being, thereby meaning that only individuals with hardiness report higher levels of well being.

George (2001) explored the relationship of psychological hardiness with age and mental health. He began to follow 185 young men of Harvard University for a period of almost 14 years making it one of the longest follow-up studies in human development. He was very surprised to find that people who had been healthy and robust in their youth could die suddenly and prematurely because of their tendency to react poorly to stress. George noted that people with poor psychological health, that is, poor stress copers, were particularly vulnerable to premature death especially if depressed or psychologically unstable. In this group of 185 people, 48 were identified as poor stress copers. Out of these 48 people, 18 died by age 53. In comparison, only two people with good psychological health, that is, good stress copers, died by the same age. Investigator concluded that good mental health slowed down the aging process while poor mental health hastened it.

Khoshaba and Maddi (2001) found that hardiness helps People Turn Stressful Circumstances into Opportunities. Results showed that about two-thirds of the employees in the study suffered significant performance, leadership and health declines as the result of the extreme stress from the deregulation and divestiture, including heart attacks, strokes, obesity, depression, substance abuse and poor performance reviews. However, the other one-third actually thrived during the upheaval despite experiencing the same amount of disruption and stressful events as their co-workers. These employees maintained their health, happiness and performance and felt renewed enthusiasm. It was found that those who thrived maintained three key beliefs that helped them turn adversity into an advantage: commitment, control and challenge attitudes. The Commitment attitude led them to strive to be involved in ongoing events, rather than feeling isolated.

Maddi et al. (2002) conducted two studies - one on a sample of 69 adults and the other on 102 members of university staff and faculty. The results of the
studies supported the conceptualization of hardiness as vigorous mental health. Further, hardiness appeared to be a pervasive aspect of personality reflecting a general tendency, involves showing psychological health, extraversion, openness and consciousness. Apparently, people who have the courage (hardiness) to simultaneously favour involvement with others and events (commitment), keep trying to influencing the outcomes going on around them (control) and emphasize learning from their experiences, whether positive or negative (challenge), have more fulfilling, satisfying, resilient and remarkable lives.

Zakin et al. (2003) assessed the role of hardiness and attachment style, as personal resources in adjustment to stress of prisoners of war and combat veterans. Results showed that both hardiness and attachment style had a direct main effect and were immensely related to psychiatric symptomatology. Results also showed that the two resources worked in a mutually compensatory manner. The findings reported a strong interaction between hardiness and attachment style may act in a compensatory manner, such that an abundance of one may make up somewhat for a paucity of the other. This was the attachment resources of subject provided with them more protection.

Baranee and Blegen (2003) conducted a study on a sample of 468 nursing graduate student in Thailand and found that student effort perception of clinical learning environment (CLE) and program grade point average had direct effects on perception of clinical competence whereas hardiness had an indirect effect on the outcome variables through its impact on student effort, perception of CLE and perception of student faculty relationship.

Kiag and Bradley (2004) examined a sample of 130 (50 male and 80 female) randomly selected university staff members. Controlling for negatively affectivity limited evidence was obtained for the direct effect of hardiness on stress and illness.

Chandra (2004) conducted research which revealed that three – commitment, control and challenge as the important ingredients of what we call as Psychological Hardiness. The high hardy people were able to handle the change with confidence, self determination, assertiveness and with the enthusiasm of
looking the change as opportunity in exact contrast to those low hardy people, who feel disturbed, alienated, threatened and absent minded in the face of any major challenge to the status quo.

Ferguson (2005) in a study conducted on clergywomen found hardiness to be mediating variables, such that the effects of the hardiness coaching were completing mediated through hardiness to affect, stress. After 12 weeks of coaching for hardiness session, hardiness was found to increase in the experimental group component of the hardiness scale was found to be the locus of change.

Starth et al. (2005) examined the relationship among daily hassles, family resources and children cognitive ability. Particular emphasis was placed on examining the relationship among the variable by family structure. A total of 205 students in first grade and third grade and their mothers participated in the study. There were 120 children from intact families and 85 children from single mother families in the study. All others completed assessment on family level variables and all children completed BIA test of cognitive ability. Multiple regression analysis was utilized to examine the relationships among the variable. Daily hassles and whesion were related to cognitive ability scores of children living in intact families. Family hardiness was related to the cognitive ability scores of children living in intact families. The findings indicated the existence of potentially important relationship among daily hassles, family resources and children cognitive ability. The findings also indicated that the relationships among variables differed by family structure.

Michael and Golby (2006) evaluates the efficacy of an outdoor adventure education curriculum on selected aspects of positive psychological development. This study examined the effects of an OAE foundation degree curriculum on positive psychological development. Fifty-two students (26 OAE students, 26 controls on an unrelated course), aged 16-39 years, completed a battery of positive psychological questionnaires (at the start of their respective courses and 3 months later) measuring psychological hardiness, mental toughness, self-esteem, self-efficacy, self-awareness, dispositional optimism, and positive affectivity. OAE
curriculum activities included rock-climbing, navigation training, countryside leadership, gill-scrambling, and open canoeing. Control students were enrolled on a classroom-based travel and tourism college course. Inferential multivariate statistics revealed non-significant (p greater than 0.05, partial h² = 0.38) improvements by the OAE group across several psychological constructs. Significant effects (p less than 0.05, partial h² = 0.15) for the cohort were revealed for total hardiness. No significant gender differences were reported. The non-significant overall effect is interpreted in terms of sample size, OAE activities, and measured personality styles.

**Barbara and Crowley (2006)** in the study *Psychological hardiness and adjustment to life events in adulthood* revealed the facts that psychological hardiness has a key role in life events. In this study data were collected from 88 persons who had lost their jobs and 227 persons whose youngest child had left home, to explore the impact of psychological hardiness on personal distress, adjustment, and coping strategies. Analyses controlling for numerous socio demographic factors as well as NEO Neuroticism and Extroversion suggested that the interaction between overall hardiness and the experience of differential life events influenced the use of planful problem solving and positive reappraisal as coping mechanisms, as well as influencing levels of positive affect. In addition, a main effect for overall hardiness on several coping strategies, positive effect, and life satisfaction was obtained. Findings also suggested that job loss was a more stressful experience for adults in this study than was the empty nest. These data indicated that hardiness may mediate responses to life events that differ in terms of their predictability and anticipatory nature.

**Maddi et al. (2006)** has conducted studies to establish hardiness as a dispositional factor despite stress for circumstances by (a) introducing a short hand version of the hardiness measures and (b) destiny hypothesis concerning the relationship between hardiness and repressive coping, right wing authoritarianism innovation behaviour and a billable hours.

**Brummett et al. (2008)** investigated the effect of psychosocial well-being on multicultural personality disposition of undergraduate students in relation to
psychological hardiness. This study examined the relationship between psychosocial well-being on multicultural personality disposition in undergraduates (N = 124). Measures of universal-diverse orientation, hardiness, psychosocial-interpersonal functioning, self-esteem, and political correctness ideology were administered. Results indicated that the multicultural personality disposition of universal-diverse orientation significantly predicted psychological hardiness, psychosocial-interpersonal functioning, and self-esteem beyond the influence of politically correct responding. These findings suggested that having a multicultural personality disposition (universal-diverse orientation) may be positively related to psychosocial well-being.

Cole and Field (2009) proposed that simultaneously considering the combined effects of students learning motivation and Psychological Hardiness can increase understanding of the learning experience and its impact on important learning outcomes. They hypothesized that individuals’ Psychological Hardiness would moderate the relationship between learning motivation and learning outcomes. Their hypothesized interaction between participant’s initial motivation to learn and their Psychological Hardiness explained differences in participants post learning motivation, depressive symptomatology, and reactions to their classroom experience assessed two months later.

Benishek et al. (2009) conducted a study and tried to understand why some students avoid challenging academic course work at the risk of harming their academic standing whereas others were willing to pursue these types of challenges. The Academic Hardiness Scale (AHS) was developed to better understand characteristics that may differentiate these two types of students. Although, preliminary findings provided support for the initial version of AHS, the measure exhibited only good to marginal coefficient, alphas and limited discriminate validity. The present investigation represented the second phase of measurement development for the ASH. The study was designed to evaluate the factor structure, internal consistency reliability, discriminate, convergent and concurrent validity and test-retest reliability of the revised AHS, results from this
study identified a three component measure that has very good basic psychometric properties. The RAHS is a significant improvement over its parent’s instrument

Cohen (2009) explored the topic what it takes to stick it out: two veteran inner-city teachers after 25 years. This study considered the lives of two veteran, urban high school teachers who have persisted in the profession over several decades, and who demonstrated an investment and enthusiasm for the work that was unusual among teachers in difficult schools. Through ethnographic, open-ended interviews and observations, the study seemed to identify those traits of character that serve to support both longevity and ongoing engagement among urban veterans. Those traits were identified here as psychological hardiness, narcissism, and an all-consuming love of subject. The study, though only anecdotal, seemed to suggest that administrators and policy-makers would do well to broaden their definition of good teaching and solicit the expertise of this overlooked and valuable cohort. Further this study showed that teachers who were more psychological hardy proved to be good at their work especially in the area of teaching and in facilitation of students as compared to those who were less psychological hardy.

Sezgin (2010) explored relationships between teacher organizational commitment, psychological hardiness and some demographic variables in Turkish primary schools. The purpose of this study was to examine the relationships between teachers’ organizational commitment perceptions and both their psychological hardness and some demographic variables in a sample of Turkish primary schools. A total of 405 randomly selected teachers working at primary schools in Ankara participated in the study. Findings supported the argument that psychological hardness was a meaningful construct predicting the perceptions of primary school teachers on organizational commitment. Results revealed that psychological hardness was positively and significantly related to both identification and internalization components of teacher commitment, whereas it was negatively and significantly correlated to the commitment predicated on compliance. Teacher compliance commitment was negatively associated with both identification and internalization. Although gender and years of experience were
significant predictors of identification and internalization, the variables of subject specialization and age did not significantly predict all three subscales of teacher commitment. This study reported the relationships between organizational commitment and teacher psychological hardiness which was a personality style reducing the negative effects of stress.

**Bonanno and Jim (2010)** conducted a co-relational study to identify hardiness components that showed variation in the academic performance of sport and exercise undergraduate students. Data were derived from 134 students from a university in the northeast of England admitted onto the second year of their degrees on the basis of successful progression from the first year of study. Students completed the hardiness PVS III-R, a measurement of commitment, control, challenge and total hardiness, at the beginning of their second year of study, and provided consent for their academic progress to be tracked. Year 2 GPA, Year 3 GPA, final degree GPA, and final-year dissertation mark determined academic success. Results showed that Commitment and total hardiness were significantly positively correlated with academic success criteria.

**Michael, Bruch and Vogel (2010)** studied emotion as mediators of the relations between perceived supervisor support and psychological hardiness on employee cynicism. In this study they explored whether emotion experienced at work mediates the relationships between perceived supervisor support, psychological hardiness, and employee cynicism. Data were collected from 201 employees working at a medical technology company located in Switzerland. Mediational analyses showed that employees' positive and negative emotions experienced amidst an organizational crisis fully accounted for the relations between perceived supervisor support and cynicism and psychological hardiness and cynicism.

**Guinn, Vincent and Dugas (2011)** conducted a study on psychological hardiness among border Mexican American women. The purpose of this study was to identify factors distinguishing Mexican American women living near the U.S.-Mexican border who were psychological hardy to the experience of stress from those who were not. The study sample consisted of 418 participants ranging...
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in age from 20 to 61 years. Data were gathered through a self-report survey instrument composed of items assessing stress vulnerability, acculturation, health, physical activity, education, and marital status. The results indicated that higher educational attainment, greater acculturation, better health status, and marriage differentiated between those women reporting themselves psychological hardy to the effects of stress and those reporting being vulnerable.

Sheard (2011) studied the effect of psychological hardiness, commitment, gender, and age on university academic performance. This 2-year co-relational study examined whether age, gender (demographic variables), and hardiness (cognitive/emotional variable) differentiate and predict university final degree grade point average (GPA) and final-year dissertation mark. Data were reported from a total of 134 university undergraduate students. Participants provided baseline data in questionnaires administered during the first week of their second year of undergraduate study and gave consent for their academic progress to be tracked. Final degree GPA and dissertation mark were the academic performance criteria. Results reported that mature-age students achieved higher final degree GPA compared to young undergraduates. Female students significantly outperformed their male counterparts in each measured academic assessment criteria. Female students also reported a significantly higher mean score on hardiness commitment compared to male students. Commitment was the most significant positive correlate of academic achievement. Final degree GPA and dissertation marks were significantly predicted by commitment, and commitment and gender, respectively.

2.5: EMERGENCE OF THE PROBLEM

Contemporary times are the times of heightened psychological stress, increased globalization and enhanced communication. Excellence has become the hallmark of survival in life. Collaborations have become the order of the day. Each passing decade is adding on to the length, breadth and depth of life. More and more skills are required to handle the pressures and stresses of life.
Review of related literature revealed that an extensive application of new strategies is making their way in the field of education. These strategies include training programmes conducted by Zollinger & Cummings (2007) and Kaur (2006); models based teaching approach conducted by Imelda (1985) and Jackman & Swan (1996); new instructional methods like quality instructions with home based remediation conducted by Malhotra (2006), mastery learning and project based learning conducted by Zimmer (2008); online instructional programme conducted by Grover (2006) etc. It is evident from the review of literature that these all strategies have proved beneficial for the students in either way.

Expanding consciousness is the free gift associated with the rising standards of civilization. Awareness is the key to expand the horizons of consciousness; levels of awareness vary according to the variations of composite human personality from cognitive to intra-personal and finally moving on to the inter-personal areas of consciousness. Enhanced awareness at one level works as a connecting link to lead on to the up gradation of the other. The pace is set and the circular motion begins completing the ring of life. This refine the higher order personal values making one proficient in the art of living life. Efficacy in life skills, this way gains momentum.

In this age of cut throat competition and dominance of market strategies also, the importance of higher order personal values and ethics based life skills are gaining ground. The best players in the market of success today are the ones who have stood by those personal values which reigned supreme in the hierarchical order. The importance of personal values is also highlighted along with the need to maintain healthy relationships with friends and family through sufficient life skills by Halter & Lang (1994) in their study.

Today's age is full of trials and tribulations and life in this age becomes an art for all those who have mastered the skills of life efficiently. Personal values and life skills have an intimate relationship with each other which can be complemented through the medium of enhanced awareness. It is the enhancement in one's awareness at all levels which gives an impetus to the enhancement of
personal values and life skills. It is this trio together which will empower individuals at the micro level and societies at the macro level to combat successfully the monster of psychological stress. The performance in groups with strong personal values is highlighted in a study conducted by David (2009); in which it is concluded that group interaction among students with strong values resulted in excellence and it also supported development of some basic values.

Awakened awareness, heightened personal values and effective life skills are the key to create individuals who experience psychological hardiness as a natural outcome during the process of living life. Contemporary trying times of heightened stress due to natural and man-made causes can be waded through successfully by training the individuals to use increasing awareness as a defensive tool. Awareness is to be enhanced at abstract level, at the level of affective self and finally at the level of the cosmic self. It is this expansion of the awareness which will include in its periphery the efficient use of life skills and effective employment of personal values so as to have a meaningfully productive correlation with psychological hardiness and this needs to be taken as the phrase goes at catch them young level. Education towards awareness should be made an essential part of the life pattern among growing teenagers so as to ensure that it remains an inseparable asset in their later lives. Models of teaching in the form of awareness training model come as a handy approach to infuse heightened levels of awareness through training.

Factors of psychological hardiness viz. a sense of control, commitment and challenge involves one’s personal leadership skills, attitudes, values and motivations that are responsible for his success in life. (Bernard, 2010). Identification of hardiness level in young adults would provide some understanding of how some individuals emerge from a period of instability and change with the life skills that help them adapt in a variety of social situations. (Collins, 1992). These studies focused on the importance of life skills and personal values in overcoming the stressful situations of life by knowing the level of psychological hardiness.
The review of related literature and the keen observation of the surroundings lead the investigator to the conclusion that awareness level needs to be enhanced. Simultaneous need also to be taken to ensure the inculcation of healthy life skills and desirable personal values to ensure that the coming generations are able to sustain the psychological stress which they are constantly exposed to. For this purpose, a humble attempt was made by the investigator to explore the effect of awareness through training on various life skills and personal values of teenagers. Moreover the present study also explored what would be the level of life skills and personal values of psychologically high hardy and low hardy pupils through awareness training model approach.

2.6: STATEMENT OF THE PROBLEM

EFFECT OF AWARENESS TRAINING MODEL ON LIFE SKILLS AND PERSONAL VALUES OF SECONDARY SCHOOL CHILDREN IN RELATION TO THEIR PSYCHOLOGICAL HARDINESS

2.7: DELIMITATIONS OF THE STUDY

Keeping time and resource constraints in view, the study was delimited to the following:

- The study was conducted only in senior secondary, co-educational and English medium schools of Chandigarh which are affiliated to C.B.S.E.
- The study was conducted on XI class students only.
- The study was conducted in the subject of Economics (Commerce Stream) only.
- Boys and Girls of various socio-economic statuses were included in the sample
- The study was restricted to the four Life Skills only viz. Acquiring Knowledge, Self-Awareness, Assertiveness and Social Skill.
2.8: OBJECTIVES OF THE STUDY

The study was conducted to attain the following objectives:

- To plan, design and validate criterion tests for XI class in the subject of economics.
- To develop and validate instructional modules based on Awareness Training Model for XI class in the subject of economics.
- To study the effect of Awareness Training Model on selected Life Skills viz. Skill of Acquiring Knowledge, Self Awareness Skill, Assertiveness Skill and Social Skill.
- To study the effect of Awareness Training Model on Personal Values.
- To study the relationship between Psychological Hardiness and selected Life Skills.
- To study the relationship between Psychological Hardiness and Personal Values.
- To study the interaction effect of Awareness Training Model and Psychological Hardiness on selected Life Skills.
- To study the interaction effect of Awareness Training Model and Psychological Hardiness on Personal Values.

2.9: HYPOTHESES

Following hypotheses were formulated for the present investigation:

**Ho.1:** There will be no significant difference in Skill of Acquiring Knowledge among students of experimental group (ATM) and control group (CGL).

**Ho.2:** There will be no significant difference in Skill of Acquiring Knowledge of Psychologically High Hardy and Psychologically Low Hardy (PHH/PLH) students.

**Ho.3:** There will be no significant difference in Skill of Acquiring Knowledge among students due to the interaction of instructional modes (ATM/CGL) and psychological hardiness (PHH/PLH).
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- **Ho.3 (a):** There will be no significant difference in Skill of Acquiring Knowledge among students of experimental group (ATM) who are Psychologically High Hardy (PHH) or Psychologically Low Hardy (PLH).

- **Ho.3 (b):** There will be no significant difference in Skill of Acquiring Knowledge among students of control group (CGL) who are Psychologically High Hardy (PHH) or Psychologically Low Hardy (PLH).

- **Ho.3 (c):** There will be no significant difference in Skill of Acquiring Knowledge among students of experimental group (ATM) and control group (CGL) who are Psychologically High Hardy (PHH).

- **Ho.3 (d):** There will be no significant difference in Skill of Acquiring Knowledge among students of experimental group (ATM) and control group (CGL) who are Psychologically Low Hardy (PLH).

- **Ho.3 (e):** There will be no significant difference in Skill of Acquiring Knowledge among students of ATM/PHH and CGL/PLH.

- **Ho.3 (f):** There will be no significant difference in Skill of Acquiring Knowledge among students of ATM/PLH and CGL/PHH.

**Ho.4:** There will be no significant difference in Self Awareness Skill among students of experimental group (ATM) and control group (CGL).

**Ho.5:** There will be no significant difference in Self Awareness Skill of Psychologically High Hardy and Psychologically Low Hardy (PHH/PLH) students.

**Ho.6:** There will be no significant difference in Self Awareness Skill among students due to the interaction of instructional modes (ATM/CGL) and psychological hardiness (PHH/PLH).

- **Ho.6 (a):** There will be no significant difference in Self Awareness Skill among students of experimental group (ATM) who are Psychologically High Hardy (PHH) or Psychologically Low Hardy (PLH).

- **Ho.6 (b):** There will be no significant difference in Self Awareness Skill among students of control group (CGL) who are Psychologically High Hardy (PHH) or Psychologically Low Hardy (PLH).
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- **Ho.6 (c):** There will be no significant difference in Self Awareness Skill among students of experimental group (ATM) and control group (CGL) who are Psychologically High Hardy (PHH).
- **Ho.6 (d):** There will be no significant difference in Self Awareness Skill among students of experimental group (ATM) and control group (CGL) who are Psychologically Low Hardy (PLH).
- **Ho.6 (e):** There will be no significant difference in Self Awareness Skill among students of ATM/PHH and CGL/PLH.
- **Ho.6 (f):** There will be no significant difference in Self Awareness Skill among students of ATM/PLH and CGL/PHH.

**Ho.7:** There will be no significant difference in Assertiveness Skill among students of experimental group (ATM) and control group (CGL).

**Ho.8:** There will be no significant difference in Assertiveness Skill of Psychologically High Hardy and Psychologically Low Hardy (PHH/PLH) students.

**Ho.9:** There will be no significant difference in Assertiveness Skill among students due to the interaction of instructional modes (ATM/CGL) and psychological hardiness (PHH/PLH).

- **Ho.9 (a):** There will be no significant difference in Assertiveness Skill among students of experimental group (ATM) who are Psychologically High Hardy (PHH) or Psychologically Low Hardy (PLH).
- **Ho.9 (b):** There will be no significant difference in Assertiveness Skill among students of control group (CGL) who are Psychologically High Hardy (PHH) or Psychologically Low Hardy (PLH).
- **Ho.9 (c):** There will be no significant difference in Assertiveness Skill among students of experimental group (ATM) and control group (CGL) who are Psychologically High Hardy (PHH).
- **Ho.9 (d):** There will be no significant difference in Assertiveness Skill among students of experimental group (ATM) and control group (CGL) who are Psychologically Low Hardy (PLH).
• **Ho.9 (e):** There will be no significant difference in Assertiveness Skill among students of ATM/PHH and CGL/PLH.

• **Ho.9 (f):** There will be no significant difference in Assertiveness Skill among students of ATM/PLH and CGL/PHH.

**Ho.10:** There will be no significant difference in Social Skills among students of experimental group (ATM) and control group (CGL).

**Ho.11:** There will be no significant difference in Social Skills of Psychologically High Hardy and Psychologically Low Hardy (PHH/PLH) students.

**Ho.12:** There will be no significant difference in Social Skills among students due to the interaction of instructional modes (ATM/CGL) and psychological hardiness (PHH/PLH).