CHAPTER II

REVIEW OF RELATED LITERATURE

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2.1 Introduction

Survey of related literature provides valuable help in the development of knowledge in research work. It helps the investigator to gain insight into various aspects of the problem area in formulating the framework for the study, developing the methodology, constructing the tool for data collection and planning the analysis of data.

Since the problem under investigation is the “preparation of a learning package for developing health awareness among student teachers at secondary level” the investigator tried to collect studies related to health issues and problems, health education, performance regarding the use of self-instructional materials and innovations in teacher education areas. After going through the literature, the investigator has selected only those which are relevant for the present study and has classified them into four sections as follows.

2.2 Studies on Health Issues

Dewitt (2003) in his study, examined interscholastic football in the State of Arkansas (N=199) and incidence of injuries sustained from participation in practice and games. School administrators were surveyed using a valid instrument to determine the level of health care supervision given during this activity. Results of this study reveal alarming statistics concerning the level of care given to a high-
risk activity such as interscholastic football participation. Schools were profiled to indicate differences in classification, size and numbers of emergency room visits during the 2001 high school football season. An estimated 75% of the variables in this study revealed statistically significant risks or unacceptable levels of health care supervision, being performed in this area.

Riederer (2000) made a study on Clinical depression. Although often unrecognised and under diagnosed, it is a grave public health concern because it has the power to devastate millions of lives, yet remains clocked in secrecy and shrouded in shame. Dispute advances in the prevention and treatment of this disease. Many of them who need help, hope and healing do not have the knowledge, or are unaware of the information, resources and medical advances available to assist them in the recovery process. The purpose of this study was to give a health education message for individuals who had been identified as experiencing depressive symptoms and to adapt and validate an instrument measuring perceptions of the health message, and to develop and propose a process for message dissemination and survey implementation in a behavioral health setting.

A simple health education message which could be delivered through the medium (written, pre-recorded telephone message and website) was developed in conjunction with staff members of a
behavioural health company. The message was designed for depressed clients and to encourage their follow-up and compliance with recommended case plans. Health education has a unique challenge ahead in terms of addressing the needs of those who suffer from depression, and discovering new methods to reach this population.

Yates (1999) tried to find out a relationship between emotional intelligence and health habits of male and female students at Mississippi State University. A convenient sample of seven health education classes (N=278) was used to answer questions of demographics, Emotional Intelligence Inventory (EQI), Emotional Intelligence Survey (EIS) and the Health Habits Survey (HHS). The findings of this study suggested that there was a relationship between the health habits of college aged health education students and emotional intelligence. This study provides a basis for health educators and health practitioners to focus on emotional intelligence as it relates to health habits. Perhaps the addition of emotional intelligence activities early in the classroom or home setting may provide a clearer pathway for the development of goals, coping skills and techniques for positive health habits. This inclusion of emotional activities to foster the development of emotional intelligence in all settings may produce positive health habits, thus promoting an enhanced quality of life.
Marick (1998) conducted a descriptive study and its purpose was to survey students, parents, school administrators and school board members of four rural Nebraska high schools to determine their perceptions regarding the five most important health issues for adolescents between and including the ages of 14 & 18. Adolescent health needs were identified through the use of a 14-item survey instrument: Youth Health Needs Survey (YHNS). The 14 health items that students used to select were: self image, family planning, dating relationships, substance abuse, problem solving, eating disorders, sexually transmitted diseases (STDs), stress management, motor vehicle safety, exercise/fitness, conflict management, gun safety, depression, and family relationships.

295 persons participated in this study: 183 students, 84 parents, seven school administrators and 21 school board members. All students selected STDs, self-image, family relationships, substance abuse, and problem solving as their top 5 health issues. It was interesting to discover that the adult group also included these same issues in their top 5 health concerns. The issue of STDs was ranked first by all students, while the adult group selected self-image as their top health concern. The findings of this study have important implications for curriculum development in that the results suggest adolescent health needs/concerns, which should be addressed in the school curricula.
Hudson (1998) conducted a study to analyse 1994 National Health Interview Survey data regarding the communication of selected health issues between parents and adolescent family members and determine statistical differences between residence (urban/rural) and geographic region (northeast, midwest; south and west) by comparing gender, race, age, education level, income and marital status of the parent.

The research design consisted of a secondary analysis of the 1994 National Health Interview Survey (CD-ROM). The sample was selected based on those respondents who had children in the household between the ages of 10 & 17 years. This study concluded that the discussions of health topics (i.e. tobacco use, alcohol consumption, illicit drug use, sexual behaviour and sex education) are taking place in families throughout the US. However, the quality of the information being conveyed in these discussions is unknown.

Singh (1995) reports about a field study on child nutrition and health concerns. A majority of the male and female respondents (98.6% and 95.5% respectively) reported that they had heard about family planning. The respondents would like to adopt family planning so as to have a small family or because of poor income or because of the incentives they would get after the operation and such other things.

Pandey (1995) in his inaugural address, at the seminar on "Tuberculosis Control Programme through Primary Health Care"
Approach in SAARC countries’ stressed the importance of integrating Tuberculosis Control Programme in developing countries within the general services. He said,” Tuberculosis is a major health problem of our region. More than 25% of the T.B. patients in the world are in our region. Every year, it has taken away a heavy toll of our most productive age group of people”.

Kumaraswamy (1995) reported that the deadly link between tuberculosis and Acquired Immuno Deficiency Syndrome has been clearly established and people with this dual infection have a 25 fold increased mortality.

Vijayaraghavan (1994) in his study revealed that dietary inadequacy is the main cause of high prevalence of vitamin A deficiency and iron deficiency anaemia, while environmental iodine deficiency is due to frequent flooding, heavy rains or glaciers in mountainous regions, characterised by poor iodine content in soil leading to deficiency of iodine in food and water which in turn is responsible for iodine deficiency diseases. Consumption of unconventional foods containing goitrogens has also been implicated. It is also found out that besides preventing blindness, Vitamin A, reduces certain morbidity and infantile mortality.

According to Girdano (1985), non-communicable diseases are neither infectious, nor are they capable of being transmitted. But these diseases tend to be more chronic (that is, they last for a long time or recur often) and degenerative rather than acute (severe, but of
short duration). Diabetes, blood pressure, heart attack, cancer etc. are examples.

Tomar (1982) in his study revealed that ignorance of the need for treatment and for measures of prevention adds to dental diseases. Though, most of the dental and peridontal diseases are not life endangering, they are extremely troublesome, incapacitating and expensive in terms of treatment. It can directly or indirectly be responsible for pain, infection, facial disfigurement, chewing and speech impairment as well as malnutrition.

The National Cancer Registry Programme established by the Indian Council of Medical Research in 1982 has also unequivocally demonstrated that while India is one of the few countries in the world with a very low overall incidence of cancer, 48% of the cancers reported in males and 20% of cancers reported in females are tobacco related and therefore, theoretically at least, preventable (Biennial Report of the National Cancer Registry Programme, 1992).

Dhillon (1979) conducted a survey of selected factors in a community affecting the growth and development of its children. The objective of the study was to obtain information of parents’ understanding of the problem and needs of their children in the case of education and nutrition. The sample for the present study included 40 households in Kamatipura slums in Baroda. It was a mixed community composed of Hindus, Muslims and Christians. A detailed structured interview schedule was prepared. The results of
the study showed that when they were questioned about as to what they felt about the needs of their children in the area of health and nutrition, many of them responded that they wanted good diet, which includes milk, fruits, eggs, fish and meat for their children. But they were unable to afford the same because of poor economic conditions. In the area of education, they wanted good schools in their community, which would contribute a mid-day meal.

Davies (1970) reported that surveys and research in different parts of the world have shown that majority of the lung cancer patients are smokers of cigarettes. The Royal College of Physicians studied this problem and their reports stated that ‘cigarette smoking is an important cause of lung cancer. Once the habit is stopped, the adverse effect of smoking and the mortality rate too get reduced.

According to Mann and Lessof (1970), blood group incompatibility between mother and foetus is the main cause of haemolytic disease of the newborn and in most cases involves the D antigen in the Rh system. The disease affects D+ve infants born to D-ve mothers and D+ve fathers.

### 2.3 Studies on Health Education

Patton (2004) analysed the relationship between increased instructional exposure and student health knowledge, health attitude and self-reported health behaviour among high school students. In this study, a suburban public board of education approved an additional health education class (Health II) as part of graduation
requirements. Subjects within the experimental group were students enrolled in the Health II Class. Subjects within the control group were enrolled in junior level English Classes, but were not enrolled in Health II. Prior to participation in this study both groups had successfully completed Health I in either 9th or 10th grade. The study instrument was a modified version of the National Adolescent Student Health Survey. A series of 3 way repeated measures of analysis of variance was performed to answer the research questions pertaining to health knowledge, attitudes, and self reported behaviour.

In terms of instructional exposure, one more semester may not have been enough to influence desired improvements within and across all three domains of learning. This is especially true with regard to influencing self-reported health behaviour. In this study, some gains in health knowledge were made among subjects within the experimental group. Unfortunately, increase in certain self reported health risk behaviour among the subjects within the experimental group was also reported. This study took place in a naturalistic school setting as opposed to a controlled laboratory environment. (i.e. pre developed curriculum and teacher preparation).

McDonald (2004) made a qualitative study focused on the experiences of eight nurses, who were making the transition from clinical practices to teaching. The purpose of the study was to learn
what these new educators believed they brought with them from nursing practice that would facilitate their transition to teaching, what their experience were like, and whether through the course of their first teaching semester they were able to draw on their nursing to facilitate their transition to nursing education. Study results showed that each of the eight beginning teachers made the transition to teaching relatively smoothly in terms of setting in to their new roles in new institutions, learning to teach, and actually teaching. The theme that emerged from data was use of self through three frames; past life experiences, caring as nurses and nursing knowledge and experience. New teachers experienced difficulty with their roles when they did not have experience being cared for as teachers and when they perceived that they lack practical knowledge.

Gallagher (2004) conducted a study to explore the perceived effects of an IHM on participating health care professional students. 32 students from US health care professional schools participated. None of them had undergone the course work to prepare them for an international mission. Both qualitative and quantitative methods, which is known as methodological triangulation were used in this. Semi structured interviews of IHM student participants (N=9) provided qualitative data.

Triangulated methodology provided an enhanced picture of the phenomenon of research. Students reported gains in substantive
knowledge, perceptual understanding, growth of an individual, improved interpersonal connections as well as enhanced self-confidence. This research highlights the value of an international health care mission to enhance student awareness, understanding, respect and sensitivity to people from other countries, cultures and economic situations. Additionally, participants indicated that IHM experiences enhanced their patient interactions, multicultural teamwork and increased their knowledge of factors impacting a client’s health status and reception of health care service.

Mwrhiad (2003) conducted a research, which is about the practices of an inter-disciplinary team of education and health professionals, including therapists and teachers, working in a special school with children experiencing physical difficulties. The focus of the study is the investigation of the ways in which education and health professionals work together in the setting and the extent to which their actions and interactions influenced by (a) the culture of the school and (b) the policies of external institutions. Other key issues of concern are how they perceive their professional roles and how far their concepts of professionalism might be changing.

It was found that the professional role of participants from both groups had changed in significant ways, such as that of relinquishing hands on work with children in order to carry out training, management or administrative activities. The research highlights differing approaches within health and education systems
that are incompatible and create additional constraints in the school setting. The practitioners concerned were found to be applying knowledge that transcends professional boundaries and mutually dependent in action when working on joint tasks.

Spears (2003) conducted a study in order to identify the health literacy skills of older adults and the preferred type, design, and delivery of health education materials for older adults with inadequate health literacy. Subsequently it was the goal to provide a basis from which healthcare practitioners can create effective health education material as a method of reducing the impact those poor health literacy skills has on health outcomes. A convenient sample of 25 participants was selected from a senior health care clinic affiliated with a large public health care system located in North Texas. To assure similarity of sample in terms of morbidity, only patients with both diabetes mellitus and hypertension were invited to participate in this study. The Short Test of Functional Health Literacy in Adults (STOFHLA) was administered to measure the literacy skills of the sample. In addition, an 18-question interview was conducted to capture the health education preference of the participants.

The participants were primarily Africans, American and Hispanic and the mean age of the sample was 76.04 year. The results of this study indicated that 48 % of the sample demonstrated less than adequate health literacy. 47% of the African-American and
Hispanic participants had less than adequate health literacy, while only a third of the Caucasian participants had inadequate literacy skills. Older adults with inadequate health literacy preferred health education that is either verbal or in the form of videotape, while older adults with adequate health literacy preferred verbal or written materials with a few pictures.

Blanco (2000) conducted a qualitative research project which explores the use of Theater of the oppressed and other popular theater techniques in health education with farm workers. The case studies were designed to train health professionals related to farm worker community. The workshops were conducted and it subscribed to the idea of participatory problem solving education. The workshops provide evidence that popular theater can contribute positively to the growing interdisciplinary field of health education. There seems to be great potential for the use of Theater of the oppressed as an arena for communal analysis of health related problems. Theater exercises allow participants to explore health issues in a safe environment that might be conductive to positive changes in individual and communal health behaviour. The dissertation, as an exploratory research, offers a simple model for future projects.

Fisher (1999) made a descriptive study designed to assess the status of health education at the district level in California’s public schools and determine the extent that districts meet state and
national recommendations. The findings suggest that, California’s school districts have less infrastructure elements to support health education. There is a lack of leadership at the district level, and a lack of district level co-coordinators and teachers prepared in health education. 40% of the districts do not have anyone responsible for co-coordinating health education, and 66% of the district level co-coordinators spend 10% or less of their time on health education. One third of the co-coordinators have professional preparation or credentials related to health, and most teachers responsible for health education have physical education credentials. State and national recommendations for effective comprehensive school health education programmes have not been implemented in most districts. Despite these findings 76.5% of the respondents believe health education is “equally” or “more important” to students’ success in school related subjects.

Albright (1999) in her multimethod study examined the perception of African Americans, Hispanics and Muslims concerning school health education issues. Twenty-two African American, Hispanic, and Muslims parents participated in a total of seven focus group interviews. Following focus group interviews, seven African, Hispanic and Muslim physicians and three religious leaders representing each target population group were interviewed in-depth individually. This design allowed the researcher to gain multiple perspectives. Needs addressed by participants included: nutrition,
sexuality education, parental education, greater parental involvement and communication between home and schools, religious/spiritual and mental health issues such as stress. Participants also identified many influences on their health beliefs and practices. Three major influences identified were environment, religion and media. In the environment category, family was most often identified. Many of the perceived influences described by participants reflect the impact of culture on health beliefs and practices.

Iseri (1999) examined health education materials to determine if presentation in expository, conversational (matching oral language) or mapped formats made those publications more or less readable. Four health education topics on Asthma, BP, Diabetes and Nutrition in twelve booklets were presented to the respondents in three formats like expository, conversational, mapped. They were instructed to compare the readability and rate them according to the easiest, the middle, and the hardest. A rating sheet was distributed to each of the 30 volunteer subjects, 15 neighbours, 15 health care professionals, who rated the readability of those booklets.

The health education materials presented in the mapped format were found to be the easiest to read and understand, the expository format was a distant second, and the conversational format the third to the expository format. Findings indicated that the mapped format is the most suitable and easiest to read and
understand; however all of those scores rated the conversational format as in the middle and the expository format as the least suitable and the hardest to read and understand. Conclusion drawn from the study were: health education booklets written in mapped format are the easiest to read and understand for readers from diverse backgrounds, experiences and knowledge; booklets written in expository format in general are the most difficult to read and understand.

Adams (1999) conducted this study to examine the relationship between the variety of play based instructional methods used, perceived constraints, perceived benefits, the flow of experience of health care educators, training session characteristics and selected background variables. The sample for the survey was gathered from the membership of the Health Care Education Association (HCEA). The conclusion of the research was that health care educators are using a variety of play based training methods and these methods, which can be easily incorporated into the training session. The most frequently cited benefit that encouraged health care educators to use play based training methods was that these methods actively involved learners. The most frequently cited constraint that prohibited the use of play based training methods was that some health care topics are not appropriate for this method.
Baldwin (1998), conducted a study which was concerned with determining whether urban third grade students who were taught a self care health curriculum differed significantly from urban third grade students who were taught the traditional health education curriculum with respect to their overall self care health characteristics and their views of success and self care action or the ability to assume care for themselves. Third grade was selected due to the developmental level of the children and capability in learning the material. The analysis phase of this study revealed that the self care group achieved higher success mean scores than the traditional group on hope and satisfaction with daily living and that the self care group achieved a lower diastolic blood pressure than the traditional group on physical health status.

Patricia (1997) tried to explore and describe experiences and needs of graduate teaching assistants (GTAs) who taught introductory health education courses. Key information identified the GTAs, and the sample population consisted of 12 females and four males who ranged in age from 21 to 46. In depth face-to-face interviews were conducted and the standardised open-ended interview approach was used. The overall experience of being a GTA, teaching introductory health education could be viewed as challenging exciting and positive. Being a GTA was stressful and it was easy to establish from the data that the anxiety and frustration associated with their job came from the GTAs not having a clear
understanding of what their roles and responsibilities were really like. Orientations that are currently being offered by departments are not effectively meeting the needs of inexperienced GTAs.

Gwin (1997) conducted a study in order to describe how the construction of multigeneration family health history affected health related knowledge, attitudes, behaviour and intentions of post secondary students enrolled in a personal health course, and to determine pedagogical effects of utilizing a multigeneration family health history construction project within that context. The connection established between health related knowledge, attitudes, behaviour and intentions support the use of this learning strategy in a personal health course. The information gained from constructing the family health history increased the value of the health education process. The indigenous information resulting from constructing a family health history is priceless and irreplaceable; the action of constructing a multigeneration family medical history represents a set of transferable life skills.

Webman (1996) attempted a study, which revealed startling information about the age of the onset of a range of risk taking behaviour among youth in residential programmes. Before the age of nine, fifty four ((18%) of the subjects smoked their first cigarette; sixty five (21.7%) of these youth had their first alcoholic beverage;
sixty one (20.3%) of these girls and boys first tried marijuana; and sixty nine (23.0%) had sexual intercourse.

There are significant differences between public school and residential school students on all dimensions of risk taking behaviours. Residential school students reported 3 times more tobacco use, four times more injectable drug use, five times more incidents of pregnancy, and double the rate of violent experiences than their public school peers. Residential school students also reported significantly higher rates of suicidal thought and planning attempts. Girls in these residential schools reported higher involvement in most dimensions of risk taking than their male peers in residential programmes. Despite the fact that youth in residential treatment exhibit such serious health related risk taking behaviour they rarely receive comprehensive health education and prevention services. This study explores categorical funding streams and service systems that could alleviate this life threatening service gap.

Nalle (1996) assessed the health and safety concerns, health education needs and current health education practices of child day care centers. 15 items on Childcare Health Education Assessment (CcHEA) was developed, viewed by a national panel of experts and pre tested with childcare directors in the study area. The majority of the directors rated health education for staff, children, and parents as very important. A significant number of centers provided health
education for each target group. The highest level of health education activity was focused on children, with 93% of centers reporting this as an integral component of their early childhood curriculum. Directors identified a number of priority health education topics for their center, including, behaviour and discipline, growth and development and infectious disease for both parents and staff, safety, fitness and exercise, and self esteem for children.

Jonas (1996) investigated about the factors associated with the implementation of a school worksite health promotion programme on multiple campuses within an independent school district. The findings from the current study will contribute to greater understanding of the processes associated with implementation within an organisational context and diffusion of innovation in schools. Results from this study can also assist local districts in planning and implementing future health promotion programmes. Effective school health promotion programmes can in turn serve to improve employees health and morale, reduce district costs, enhance teacher capability, improve organisational image, provide positive role models for students and contribute to the overall school health programme.

Grimm (1996) decided to determine the impact of a college health course, which utilized a behaviour contract approach on the health behaviours of college students. The sample consisted
of 210 traditional college students (17 to 24 years of age) enrolled at an upper Midwest University. The college Aged Health Behaviour Survey (CAHBS) was developed and administered by the researcher to students. The CAHBS investigated the self-reported health behaviour of college students. Results indicated that health knowledge plus behaviour contracts produced change, especially in diet, exercise and weight control.

Burnes (1996), through his study tried to determine whether increased levels of wellness knowledge in a student population resulted in better attitudes towards health and the increased use of health promoting behaviours. During the semester the class was taken and observed whether the increase had a sustained effect. The study utilized a two group repeated measures design with an experimental and control group. The wellness knowledge, attitudes and Behaviour Instrument were used to gather data. These instruments measure the areas of physical activity, nutrition and stress management of college students.

Results showed that the wellness knowledge scores of the experimental group were significantly higher than the knowledge scores of the control group at both post and post-post data collections. The wellness attitude scores of the experimental group were significantly higher than the attitude scores of the control group at the post, but not at the post – post data collection. The wellness
behaviour scores of the experimental group were not significantly higher than the behaviour scores of the control group at either post or post-post data collection. There was significant but weak relationships between wellness knowledge, attitude and behaviour.

Welle (1995), through the study tried to explore some health education philosophies like Cognitive based decision-making, behaviour change, freeing/functioning and social change. This was done in order to ascertain if there is a single dominant philosophy ascribed to by health educators; discover any variations in philosophical preferences among health education practitioners and academicians. Findings inferred from data analysis reveal that the overall philosophical preference of health educators as determined in educational situations was behaviour change, followed by freeing/functioning. In the rank order exercise, most preferred stated philosophical belief was decision-making. These contradictory findings indicated that stated philosophical beliefs are not necessarily put into practice. This finding suggests that philosophical belief systems for these two groups of health educators were quiet similar.

Scherpereel (1995) investigated health education faculty demographics, preparation, attitudes, teaching strategies and intended outcomes relative to the teaching of ethics in professional preparation programmes. A total of 307-health education faculty participated in the study; 229 indicated they included ethical enquiry
and discourse in the health education course they taught. The results of the study suggest that while health education faculties see ethics as a valuable component of the health education curricula, many lack specific training in ethical enquiry and discourse. Increased initiatives for faculty development in ethics have the potential for positively impacting the identification, examination and resolution of ethical issues in health education both now and in the future.

According to Singh (1995), mass immunization, environmental protection, safe water supply, elimination of flies and mosquitoes, disposal of excreta, general hygienic measures, nutrition and health education, family planning and spacing are some of the important components of health education to be imparted to the community. It must be realised that education for health and nutrition must fit into the local customs, habits and morals.

Panachakel (1991) worked on health education and community development and found that the programme, ‘Health for One Million’ (HOM), helped in community development. It was reported that mothers can play a very important role in improving living conditions of their community and that voluntary effort is a critical factor in implementing a health based community development programme in rural areas. Stronger interaction among the members of the programme played a vital role in the success of the programme.
Bhattacharya (1991) conducted an experimental study, which aimed at enhancing the level of pupil achievement through a community-contact intervention in the formal curriculum and for enhancing the perception and practices of community members in respect of nutrition, health, and environmental sanitation (NHEES). The study was conducted in seven states, including Bihar, Karnataka, Maharashtra, Mizoram, Orissa, Rajasthan and Uttar Pradesh. The study found that differences existed between the total achievement of pupils belonging to project schools, non-project schools and project schools with community contact programmes. Further the pupils of Classes I - V of project schools performed better in the total test than those of non-project schools. Pupils of project schools with community contact programme performed better than the pupils of project schools.

Varghese (1991) studied the health status of primary school pupils and its influence on achievement, for framing a school health programme. It was found that there is a significant association between health status, achievement and intelligence.

Upadhyay (1990) and Smitha (1992) investigated issues related literacy/instructional materials. Upadhyay (1990) examined the development of literacy and post-literacy materials on health development by the investigator for illiterates and neo-literates. Smitha (1992) attempted to assess the efficiency of selected instructional materials developed for popularisation of wheat and
wheat products, using an experimental design. It was found that the subjects exposed to instructional materials gained sufficient knowledge of wheat and the intervention became a success. It was concluded that if proper instructional materials are used, health education will be effective.

Dhanasekeran (1990) attempted to study the awareness of primary and middle-school teachers regarding health promotion among the school-children. It was found that primary and middle-school teachers had low awareness of health promotion measures, in general and that the female teachers and urban teachers were a little better than their counterparts in their awareness.

Potdar (1989) examined factors related to mobilising education to reinforce primary health care through school children as change agents and revitalising the school health programme to attain the goal of “Health for All” by AD 2000’. The study reported that elementary school teachers had inadequate knowledge of health education and coordination among the authorities of education, social welfare and health departments was lacking. It was also found that health education and management of a school health programme were not included in the pre-service education of teachers and teachers were unable to integrate the health education topics with other school subjects.

Kamble (1989) studied health education in rural areas with a specific reference to Talegaon Dabhade Primary Health Centres
(PHCs). It was found that the PHCs do not function well due to the adverse socio-economic profile of the rural population, caste and economic inequalities, high rate of illiteracy and inadequate information.

Gopalan (1989) conducted a study to assess the current status and relevance of community nutrition and health programmes through the health care system. The study reported that people were not aware of the nutritional health education programme. At the top level, the people involved in the implementation of the programme believed that it was necessary but did not accord it a high priority. At the middle level, people were willing to do a good job but had either inadequate training or suffered from lack of proper aids in imparting knowledge effectively.

Chandramani (1988) also conducted an impact study on nutrition education at different levels, including pre-school, primary, secondary and higher secondary, and found that nutrition education had a positive impact on the children at all levels in terms of the nutritional knowledge gained, attitudes and dietary practices. The study recommended that nutrition education should be integrated with the school curriculum at all levels.

Weber (1978) compared the values-clarification and lecture methods in health education. Six hypotheses were tested: values clarification and lecture methods would be equally effective in generating and maintaining a positive change in health knowledge,
health attitudes, health behaviour, a flexible world orientation, self actualisation and in addition students would evaluate both teaching methods. From the results of this study, it was concluded that the objectives of health instruction are equally served by both methods.

Osman (1974) examined the feasibility of using selected value clarifying strategies in a health education course for future teacher. The study was further designed to develop, modify, describe and evaluate the selected strategies. The results led to the conclusion that the use of selected values clarifying strategies in a health education course for future teachers is not only feasible but also personally satisfying and professionally edifying.

Gopalan (1974) conducted a study on education concerning prevailing health problems and the method of preventing and controlling them was considered to be one of the first eight essential activities in primary health care. Good habits of personal hygiene are an integral part of daily life of individual and community, which can only come through sustained education and not by medical prescriptions.

A longitudinal study was conducted by Biswas (1990) and associates to assess the impact of health education on the knowledge, attitude and practices of school children. The findings of the study revealed that the health knowledge of the students regarding personal hygiene was relatively poor. Thus, the present findings pointed towards the fact that in the schools, greater
attention had not been paid in imparting the health knowledge to the students. The present finding also showed that the personal hygiene practices of the students also increased up to six months and thereafter remained more or less consistent there by establishing the impact of the education in motivating the children and in converting their knowledge and attitude into practices.

The World Health Organization (WHO, 1954) pays attention to health education, which aims at bringing scientific knowledge to people so that they can use such knowledge for the betterment of their own health and health of the people, or community in which they live. According to WHO, it is necessary because

a) Health cannot be thrust on people but must be organised through their own efforts.

b) Ignorance, prejudices and many social and cultural factors imperil health. Hence, education is needed to replace ignorance by knowledge, remove prejudices and bring about changes in beliefs and attitudes in a direction favorable to health.

### 2.4 Studies on Self Instructional Materials

Tran (2004) conducted a study on “Effects of formative feedback and assessment on self-regulation in pre-service teacher preparation”. The study concludes that at any points during standards-based, technology-supported instruction when student
persistence and/or effort is found to be lagging, feedback that provides accurate and concrete information on how to persist or invest more effort results in increased achievement for all learners, regardless of their prior knowledge or self-efficacy.

Palak (2004) conducted a study on “Teachers’ beliefs in relation to their instructional technology practices”. This study investigated how teachers’ beliefs and factors relate to teachers’ instructional strategy practices. The results obtained from this research point to the following: instructional technology practices of teachers in substantial ways relate to (1) their beliefs about teaching and technology and (2) the contextual conditions in their teaching environments.

Palmer (2003) made a study, which comprises the English reading comprehension of Korean University students under 5 conditions. The 3 self-instruction conditions (20 minutes on task) were (1) student reading with L1 glosses (translation of words & phrases); (2) reading with L2 glosses (written explanations in English, the L2); and (3) reading with no glosses. The first two instruction conditions were traditional instruction (providing a complete oral translation for 20 minutes while the student read) and English-only instruction (a 10 minute lecture giving structure and contents followed by 15 minute reading). The statistical analysis of all the data reveal that the L1 gloss participants out performed all other groups.
The L2 gloss and traditional instruction participants out performed the control & English only instruction participants. The survey revealed that students would prefer to study individually with L1 & L2 glosses rather than in the traditional way from a teacher.

Rehberg (2003) conducted a study to compare two instructional methods of delivering a Cardio Pulmonary Resuscitation (CPR) training programme for lay rescuers. The first method studied was a traditional classroom style adult CPR training programme with a certified CPR instructor. The second method was a computer based adult CPR training programme. Both instructional methods are standardised courses offered by the National Safety Council, Itasca, IL, USA. The study compared the two methods of delivery to determine if the computer based training course is as effective as the traditional classroom based course. Statistical analysis of the data revealed there was no statistically significant difference in terms of performance on knowledge exams and skills sequence. However subjects in the classroom trained group performed statistically significantly higher than those in the computer based training group in difference between skills performance as measured by the computer manikin system (P<0.05).

Rosa (2002) prepared a learning package for developing environmental awareness among secondary school students and tested its effectiveness. Analysis of the data revealed that the learning package is very effective in developing awareness about different
environmental issues and aspects among secondary school students. It is also found that the prepared package is effective in enhancing the achievement of secondary school students’, at Knowledge Understanding and Application level.

Binumon (2002) conducted a study entitled “Effectiveness of three approaches in instruction – modular, lecture cum modular and conventional lecture in learning the topic Fisheries” at plus two level. The study concluded that modular approach is more effective than the other two methods such as lecture cum modular and conventional lecture method.

Bindu (2001) conducted a study named ‘Preparation & testing of a learning package on Apiculture for second year degree Zoology students. The objectives of the study were (1) to study the extend of familiarity of BSc Zoology students with Apiculture and related aspects, (2) to prepare a learning package on Apiculture for second year degree Zoology students and (3) to test the effectiveness of the learning package prepared by comparing it with that of the Formal method. The major findings were (1) present teaching learning process (Lecture method) is ineffective in developing practical occupational awareness among BSc Zoology students in the occupation ‘Apiculture’ that they have learnt in their BSc Zoology Syllabus and (2) the learning package is more effective than text book in the teaching Zoology in Colleges.
Balasubramanian and Rangarag (2002) conducted a study on “Development and Validation of Syllabus oriented computer based Instructional Package in teaching Physics. The objectives of the study were,

1. To develop syllabus based Computer Software Packages in teaching Physics at Higher Secondary Level.

2. To validate the developed Computer Software Packages from technical and pedagogical point of view by experts, educationists and practicing teachers.

The developed computer software packages have proved quite effective.

Nayar and Subha (1999) conducted a study on “Self- learning Instructional Material in the Teaching of Biology: an Experimental Study.” The study found that

1. The experimental group, which used Self- Instructional Materials, recorded a high achievement score than the control group, indicating that the learning strategy of using Self- learning Instructional Material was effective in improving the level of achievement.

2. Self- learning Instructional Material was found effective in enhancing the performance of students as the experimental group scored significantly higher in their post-test scores than that of the pre-test scores.
Banerjee (1999) examined the effects of individuals learning styles and their attitudes toward computers on their evaluation of three Computer Assisted Instruction (CAI) modules in health education. Three CAI modules or tutorials were created and copied on compact disks (CDs). The tutorials were designed to instruct users on how to access, download and graph vital statistics data from the US Bureau of Census and the Centers for Disease Control and Prevention (CDC). Participation in the study was invited from students, professionals and university faculty who were members of the Health Education Directory (HEDIR), an electronic discussion list. An Inventory of Learning style, a Computer Attitude Scale, a Tutorial Evaluation Scale, a demographic data sheet, along with a CD was mailed to the participants. A statistical analysis was performed to assess the extent of influence on the participants learning styles and attitudes toward computer on their evaluation of the tutorials. It could be concluded from the analysis that although individuals learning styles do not impact their evaluation of the tutorials, their attitudes towards computers do. Moreover, professional standing effected the evaluation of tutorials, but the number of years of computer use did not.

Mathew (1998) conducted a study on “Preparation and testing of a learning package in Zoology for final year Degree students on the topic. ‘Sericulture’. Major findings were (1) the present teaching learning process is ineffective in developing practical occupational
skills among B.Sc. Zoology students in the occupation ‘Sericulture’ that they learned in their applied Zoology syllabus (2) the proposed learning package is more effective than textbook in the teaching of Zoology in College.

Harris (1998) investigated the effectiveness of an experimental teaching approach in promoting development of student attitudes, behaviours and knowledge in health education. The teaching for Health Understanding approach was compared to a traditional instructional approach in health education in a public secondary high school. Students in both the experimental and comparison group completed a pretest prior to instruction and a post-test following instruction. The study showed no significant differences in either teaching approaches or student outcomes related to the differing teaching approaches. Changing health attitudes, behaviour, and knowledge poses major challenges to health education.

Garay (1998) examined the relationship between a rural audiences’ frequency of exposure to radio plays, which promoted nutritional and health related practices, and their attitudes and knowledge about these recommended practices. The data were collected by the administration of a designed survey instrument (questionnaire) for the study. The audience was pre tested at the beginning of the programme broadcast and then post tested after its conclusion. This study concluded that radio, is an efficient tool to
reach its rural audience. It has an important influence in the audience’s attitude and is especially effective in the transmission of basic knowledge about nutrition and health.

Rajaswaminathan (1998) conducted a study on “Impact of Multimedia Package in the Teaching of Commerce with Reference to select variables.” The study found that the use of Multimedia Package was more effective than conventional method of teaching.

Gray (1996) studied the difference in achievement of students in traditional and distance learning environments. Non-experimental design was formulated to conduct the study. Achievement test and questionnaire were the major tools used. The study concluded that students in distance learning environments achieve academic success at a rate equal to or better than students of traditional environments.

Kumar (1990) conducted a study on the effect of Teacher Assisted Modular Approach in teaching Physics in Secondary schools of Kerala state. The study concluded that the Teacher Assisted Modular Approach is more effective than Textbook Approach in teaching Physics.

Mohan (1990) conducted a study on the Teacher Assisted Modular Approach in teaching Chemistry at secondary schools of Kerala. The study revealed that the Teacher Assisted Modular Approach is more effective than Textbook Approach in teaching Chemistry.
Hill’s (1988) experimental study compared the traditional method of teaching and an individualised learning package. The experimental group scored significantly high and the mean time spend was also less than the control group.

Self-learning programmes for teachers were developed by Lambhate (1987) and Das (1990) and the effectiveness of the material was studied. Quasi-experimental design was used to conduct the studies. Achievement test was used to assess the performance of participants. The study revealed that teaching through self-learning material is significantly more effective than traditional teaching.

Hopper (1987) conducted an experimental study in the use of modular approach for teaching Biology in standard IX. The main objectives of the study were (1) to design & develop instructional modules selected units in Morphology, Physiology, and Ecology of higher secondary classes (2) to find out the relative effectiveness of 3 modular approaches involving self-learning, peer group learning and peer group learning with teacher intervention with reference to the objectives. The major findings of the study were (1) the modular approach of teaching Biology led to significant increase in the academic motivation of the students (2) there was no relationship between intelligence and mean gain in achievement through modular instruction.

Rabindradas (1984), Siddque (1986) and Al bader (1993) had developed self-instructional materials for the benefit of students at
the secondary level and studied the effectiveness of them. Pre-test and post-test were conducted to validate the efficiency of the material. The findings revealed that self-learning material on health education are very helpful for the secondary school students to achieve better learning than the conventional classroom teaching.

Bailkeri (1983) studied the effectiveness of self instructional microteaching course used for the in-service learning of secondary school mathematics teachers. The self-learning materials in print (Two hand books) and an audiocassette were developed. The effectiveness was tested by the comparison between the scores of pre-test, post-test and delayed post-test. The study concluded that the self-instructional microteaching course was very effective to improve the general instructional competence of mathematics teachers.

Justus (1981) conducted a study on “Preparation and Comparison of Supervised Study Module with Text Book Approach in the Teaching of Biology in High Schools of Kerala.” The objectives of the study were (1) to determine the effectiveness of supervised study module in teaching biology and (2) to compare its effectiveness over textbook approach in teaching under the categories of objectives; Knowledge, Understanding, Application and Skill. The study found that supervised study module is more effective than textbook approach in the teaching of biology in high schools and again it is more effective than textbook approach in the teaching of biology.
under the categories of objectives: Knowledge, Understanding, Application

Varma (1998) made a study to examine the effectiveness of instructional media in modifying the cognitive and affective behaviour in prevention and control of Acquired Immuno Deficiency Syndrome (AIDS). The objectives of the study were (1) to find out whether the effect of instructional media viz. video, audio, slides, posters and lecture method are effective in modifying the cognitive and affective behaviour among undergraduate students with regard to AIDS epidemic and (2) to find out whether there is any significant difference between lecture method and different instructional media.

The findings of the study were, instructional media was effective in achieving the instructional objectives in AIDS awareness programmes and different instructional media viz. video, audio, slides and lecture method were not effective in changing the attitude towards AIDS epidemic except posters as an instructional media.

Wilkinson (1976) developed a ‘Learning Package’ for teaching science. Learning Package is a collection of materials to effect specified learning outcomes with minimum teaching contact. The conclusion was that learning Package can offer a great variety of learning experience thus allowing selection according to individual styles of learning and that it allows students to learn at their own pace and time.
Jernsted (1976) conducted a study, which revealed that students under individualised instruction reviewed their course more favourably than students under traditional instructions. Individualised instruction produced superior performance only when the unit completion activities of the individualized section were similar to the behaviors on the examination instruments.

Heller and Date (1976) conducted a study to compare the effectiveness of instruction using a “Learning Module Approach” with that of instruction using a “Traditional Lecture Discussion” in an undergraduate course entitled “Psychology of Exceptional Child”. The result of the study showed that module programme results in significant gain for students.

Pultorak (1975) and Rowland (1995) worked on modular approach for effective instruction of graduate students. Questionnaire, pretest & post-test were used to gather relevant information. The results showed that modules are very effective for instruction.

Hurst (1974) designed flexible competency based learning module to change elementary teacher trainee’s knowledge, skills and attitude towards enquiry teaching. The effectiveness of the module was compared in three classroom settings, individual group and control group. The study revealed that in both individualised and group settings, teaching learning modules may serve as means to creative instruction in teacher education in the future.
Donald and Mervin (1973) conducted a study to investigate the effectiveness of a series of Self Instructional Modules (SIMs) for training secondary level social studies teacher trainees to develop and ask higher-level questions. The study showed that self-instructional module is more superior to conventional methods for developing concepts and skills.

The effectiveness of multimedia approach for teaching Secondary School level pupils was experimentally studied by Poornam (1968), Siemankowsky (1969), Krishnan (1983) and Vasanthakumari (1986). The studies showed that multimedia approach is found to be effective in improving competency of students. This approach seemed to benefit both high and low achievers, and it tends to increase the interest of learners. The rate of achievements also seemed to be higher than that of teaching using traditional methods.

Programmed materials were developed by Young (1968), Reid & Booh (1969), Cavanagh (1969), and Chauhan (1973) and their effectiveness as a means for self-learning was studied. The studies were conducted with experimental groups and control groups. The studies revealed that individual learning is a success. The advantage such as more responsible attitude from the part of pupils and lowering the cost of education were obtained as results. It was concluded that auto instructional material is effective for self-learning of adolescents and adult learners.
2.5 Studies on Teacher Education

Selvester (2004), in a correlational study, examined the relationship between 52 credential candidates self regulated learning in their teacher preparation course work and their performance in their teaching practice. The relationship between credential candidates’ goal orientation and self-efficacy towards learning and performance in their course work and this performance in teaching practices were also examined. The results indicated that there was statistically significant degree of shared variance between self regulated learning and teacher performance in teaching practices, $r = 0.29$ and a small but statistically non significant correlation between the candidates self-efficacy for learning and their performance in the teaching practice as measured by TPA (Teacher Performance Assessment), $r = -0.16$. An ANOVA revealed the high self-regulated learners used a greater number of self-regulated learning strategies than the low self-regulated learners.

Graefe (2004) conducted a study to gather data that assessed elementary teachers’ perception of ability and willingness to provide health care services. Another purpose of this study was to discover how these health care services affected their morale. A survey methodology was used to obtain data concerning teachers’ perceptions of preparedness and willingness to perform the health care services. Of the 11 services asked about, teachers most frequently replied that they were very unprepared to provide ten of
the eleven services. They answered the same in the area of willingness. Correlations were also studied. It was determined that as teaching experience increased, preparedness and willingness decreased and that as age increased, willingness decreased. Also, it was determined that teachers who had taught a student with a disability perceived themselves as being slightly more prepared.

Personal interviews were conducted with teachers to understand how these services affect teacher’s morale. Teachers repeatedly articulated that their morale would be affected if they were asked to perform health care services. When teachers were asked to articulate what they feared about providing health care services, they stated that they were worried about hurting a child and what would do if the procedure went wrong and also indirectly affecting the regular students.

Baldwin (2002) conducted a research which offers many examples of the challenges faced by lesbian, gay, bisexual and transgender (LGBT) youth and the need for more teacher training in the area of LGBT equity issues. This study was designed to examine pre service teacher’s perception of current equity practices in teacher preparation. Two hundred and eight undergraduate pre service teachers from northwest institution of higher education were surveyed. The respondents: (a) reported a basic level of awareness of LGBT equity issues (b) assessed their teacher preparation programme climates as both negative and positive (c) reported that very few
teacher preparation courses addressed these equity issues; and (d) gave suggestions for inclusion of this topic in their programs. The result provides a descriptive foundation upon which teacher preparation programmes can build curricula and training related to LGBT equity issues.

Oliveira (1998) did a study, which examines the teaching of health education to prospective elementary school teachers in the urban environment of Rio de Janeiro (Brazil), articulating the investigation of empirical realities with critical educational theory. It identified personal, institutional and social factors currently influencing this teaching. According to this study, the teaching of health education currently implies being “health missionaries, hygiene instructors, school health advocates, health technicians, public health activists, guardians of youth and warriors for peace”. Besides there is an emerging pressure for educators to become “health navigators” in the cyberspace. A better understanding of this educational reality requires combining the concept of teachers as “transformative intellectuals” with the idea of them as “creative actors”. Educators participate in “revolutions in the microspere” create histories as shaped by and contribute to shaping the history of schools, education and societies.

Passi (1994) conducted a case study on the personalised Teacher Education programme. The study revealed that the programme was highly useful for some participants.
Green (1994) conducted a study on self-guided training of teachers for the treatment of pupils with developmental disabilities through video. The training programme of self-guided mode through video medium was found to be effective.

A study was conducted by Zielonka (1992) on “The influence of co-operating teachers’ utilization of a reading instructional strategy and other factors on pre-service teachers’ implementation of that strategy.” The purpose of this study was to examine the influence of co-operating teachers on specific reading instructional strategies used by pre-service teachers in field placement classroom. Results were analysed statistically and descriptively to determine the influence of having co-operating teachers’ use of the Directed Activity on pre-interns’ implementation of that strategy. No significant interactions occurred.

Mollykutty (1991) studied the Effectiveness of Modular Approach in Teacher Education and Requisites for Implementations. The study revealed that modular approach has not been introduced formally and structurally in any of the Teacher Education Institutions. And the UGC Curriculum Development Committee, which was entrusted with the task of the preparation of model curriculum for the postgraduate and undergraduate course in Teacher Education have advised the use of Modular approach and also presented the model curriculum as modules.
Heaton (1988) studied the effects of teacher training on students and teacher performance and revealed that the training had only a short-term effect on teachers. But this training was effective to improve pupil performance.


Sharma (1981) verified the expected behaviour of student teachers who had completed a training course and concluded that the student teachers do not get a precise idea about what is expected from them as teachers.

Chopra (1964) proposed the essential reformation in B.Ed training such as making more emphasis to educational psychology, practical training in educational evaluation, co-curricular activities and for practice teaching.

Ray (1952), Chauhan (1962), Jha (1962), Prashar (1963), Akthar (1965) and Shanguya. (1995) studied the effectiveness of secondary level teacher training programmes and its curriculum. The studies revealed that the teacher training programmes were theoretical and their curriculum involved only superfluous aspects unrelated to daily life. The studies emphasized the need of refresher
courses for teachers in every five years of after completion of their training course.

**Conclusion**

The insight and knowledge gained by the review of studies on health issues and health education inevitably leads to a better-designed project and greatly improves the chances of obtaining important and significant results. The foregoing review of studies on individualised learning, self-learning and other innovative strategies relevant to the present study revealed that learning through these new innovative learning strategies are very effective. The studies on secondary teacher training programme relevant to the present study are very few. The foregoing review of studies shows that the curriculum followed by many training institutions is superfluous and theoretical and not suitable to go hand in hand with advancement in teacher education. Majority of the student teachers do not know what is expected from them as teachers. It is also revealed that the effect of training is not long lasting though it improves pupil’s achievement. The review of related literature enabled the investigator to frame the hypotheses and design the appropriate tools for the present investigation.

The investigator does not claim that the survey of studies attempted in this chapter is complete. However, the review of related literature presented above enabled the investigator to get an idea of
what has already been covered in the area under investigation and realise the magnitude of the problem. It is hoped that the general trend shown by these studies can be considered along with the nature of the influence of factors under the present study.