REVIEW OF RELATED STUDIES
CHAPTER III
Chapter 3

REVIEW OF RELATED STUDIES

INTRODUCTION

The review of related literature involves the systematic identification, location and analysis of documents containing information related to the research problems. The review has several important functions that make it well worth the time and effort. The major purpose of reviewing the literature is to determine what has already been done that relates to your topic. This knowledge not only avoids unintentional duplication, but it also provides the understandings and insights necessary to develop a logical framework into which your topic fits. In other words, the review tells the researcher what has been done and, in so doing also suggests what needs to be done. The review of literature is as important as any other component of the research, and it can be conducted quite painlessly if it is approached in an orderly manner.

The investigator made an attempt to collect the details of studies, which are related to the present study. The details are given in this chapter under the following headings.

- Studies Related to Modular Approach
- Studies related to Academic Achievement
- Studies related to Socio-Economic Status and Intelligence.
STUDIES RELATED TO MODULAR APPROACH

Riasat Ali (2005) conducted an experimental study on the Development and Effectiveness of modular teaching in Biology at secondary level. The result of the study indicated that modular approach was more effective instructional paradigm for Biology as compared to the traditional method of teaching. Further, modular teaching appeared more favourably for low-achievers than high-achievers. The results of this study provide base for the application of Modular Approach in the Biology classroom as well as for further research in this field for the further extension of this method to other subjects and levels.

Mony and Thangaswamy (2005) conducted a study on the effectiveness of teaching English through actions and oral practice in primary school. It was found that this group of Standard V students taught through actions and oral practice uses letter in its oral comprehension. English teachers can teach English grammatical features effectively through action and oral practice in primary schools. Teaching through actions and oral practice was found very effective in teaching oral comprehension of English grammatical features and improving the speaking skills of the students.

Kumari (2002) examined the effectiveness of the physics module prepared for Standard XI of Kerala State open school. The major findings of
the study were (1) coverage of the syllabus in the module was satisfactory
(2) the physics module was not suitable for self learning (3) the major aims
and functions were not satisfied by the module (4) the module was
appropriate to the age level of the learners and (5) mode of presentation of
module was not satisfactory.

Sunil, Dutt and Divender (2002) conducted an experimental study on
the effect of self-learning modules on achievement in economics of senior
secondary students. The major findings of the study were:

- Students exposed through self-learning modules were found to
  achieve significantly higher scores than students taught the same
topic through conventional method of teaching.

- Sex accounted for differential achievement in economics. Male
  students got significantly higher mean post achievement test scores
  than female students.

- Students belonging to both rural and urban places of residence
  achieved almost identical mean post achievement.

Alice Ani (1997) prepared an instructional module in Chemistry to
find the effectiveness of teacher assisted modular approach on achievement
in Chemistry. The findings of her study showed that modular approach is
more effective than textbook method. She found that in modular approach
the objective knowledge, understanding, application and skill are higher than
the traditional approach.
Lilly (1997) measured the effect of module based instruction in the achievement of Hindi language of secondary school students. She prepared instructional module for IX\textsuperscript{th} standard students of Kerala. She made an experimental study with sample of 35 students to measure the effect with that of text book approach on achievement in Hindi and found that module based instruction is more effective than that of text book approach. Considering the level of cognition such as knowledge, understanding and application it is seen that module based approach is more effective than that of text book approach on Hindi achievement.

Abraham, Jolly (1996) prepared an instructional module ‘effectiveness of modular approach on Chemistry achievement in secondary school student. It found that Modular approach was more effective than traditional method.

Varghese, Ancy (1995) designed a module and found its effectiveness by comparing it with traditional text book approach. The results of her study revealed that modular approach is more effective than text book approach. She compared the effectiveness under the categories of instructional objectives knowledge, comprehension and application. She found that at knowledge level both methods are equally good, but at comprehension and application levels the modular approach is more effective.

Marret, Renu (1995) constructed a support study module for learning the occupational aspects of coconut cultivation, at degree level. The
conclusions that emerged out of the analysis of data included the following points:

- Conventional method of teaching was not adequate in developing the skills of B.Sc. Botany students.

- The module prepared was found to be effective in giving students knowledge in an integrated fashion.

Hazeena (1995), made a comparison of modular approach and traditional text book approach in teaching physics. She found that the modular approach is more effective than the traditional text book approach.

Puri (1993) developed improvised science kit and tried out in a few rural as well as urban schools in and around Bathinda in Punjab at Primary level. The children receded positively and gave a good response about the performance of various activities.

Prakash (1993) conducted an experimental study for finding out the effect of guided self study for learning chemistry. This provides a chance to the students to study on their own and get the guidance only when it is needed. It was found that experimental group performed better than the control group.

Mollykutty (1991) conducted an experimental study for finding the effectiveness of modular approach in teacher education and requisites for implementation. The results showed that modular approach is more effective
than the traditional approach. Implementation of modular approach requires more facilities in educational institutions.

Mollykutty (1991) was conducted experimental study to measure the effectiveness of modules self method and found that there is significant difference in the total score of knowledge of the experimental group over control group.

Arunachalam (1991) developed an instructional module in learning of History for students of standard X. The results showed that the experimental group scored high in achievement test. As far as the total group is concerned, the use of instructional module definitely improved their learning of history. Same result is obtained when the objective knowledge, comprehension, application and skill are tested. The study revealed that instructional module is superior to the traditional approach for it contributes to the attainment of knowledge, comprehension, application and skills.

Sansanwal and Joshi (1990) studied the effectiveness of instructional strategy in terms of higher mental ability. An experimental study has been conducted to study the impact of specially designed instructional strategy on higher mental abilities of school children. The specially designed instructional strategy consisted of six components namely, programmed learning materials, experimentation, assignment, and discussion. Sample consisted of 100, class IX students divided into two groups, experimental and control. Post-test results were compared and found that the instructional
strategy developed under the study was found to be significantly superior to
the traditional approach to teaching in terms of development of the abilities
such as application, analysis, synthesis, evaluation and overall higher mental
ability in science.

Santhoshkumar (1990) conducted an experimental study on the effect
of teacher assisted modular approach in teaching physics in secondary
schools of Kerala State. The study intended to find out the effectiveness of
modular approach in teaching physics. The findings showed that the teacher
assisted modular approach is more effective than textbook approach for
student achievement in teaching physics.

Madhumohan (1990) studied the effect of teacher assisted modular
approach in teaching Chemistry in secondary schools of Kerala. The
findings of this experimental study revealed that the teacher assisted study
module is more effective than textbook approach in the teaching of
chemistry in high schools.

Anitha (1989) conducted a study on “preparation of modules for
teaching the topic ‘Analysis of Basic Data in Basic Mathematics for
Standard VII’.

The main objectives of the study were:

- To prepare a module for teaching the topic. ‘Analysis of Basic Data’,
  and
- To find out the effectiveness of modular approach in teaching mathematics and to compare the effectiveness of modular approach with the traditional method of teaching.

The findings showed that the modular approach is more effective than traditional method.

Mohammad (1988) developed and evaluated a modularized individualized instruction science course in Kuwaiti secondary school. The purpose of the study was to develop, implement and evaluate a science course in accordance with modularized, individualized instruction principles. Major findings of the study were that modularized, individualized instruction was significantly effective in producing overall achievement.

Ginapp (1985) studied the influence of teacher assessment module tapes on student teacher’s performance. The student teachers who viewed and analyzed teacher assessment module tapes (TAMS) developed for use in the project received high rating on an observation instrument by their co-operating and university supervising teachers than students who do not view the tapes. Sample included 80 elementary and secondary student teachers, 80 cooperating teachers and 15 university supervising teachers. Results indicated that students in the experimental group received higher overall ratings by all three rating groups. Significant difference in ratings between experimental and control groups were found by time of last observation period in the ratings by both groups of co-operating and supervising teachers.
Pankiewicz (1984) studied the effects of a self-designed introductory junior high school organic chemistry module on selected student characteristics. The major purpose of the study was to develop an experimental module and then to assess it in terms of its effectiveness, and applicability. The experimental group studied in traditional way. The findings of the study revealed that experimental group gained high in post-tests. Sex and I.Q. were found as not influencing the achievement. Previous achievement was shown as good predictors for achievement in post-test.

Miller (1983) studied on computer oriented application modules for abstract algebra. 26 students formed the sample for the study. The findings of the study revealed that students favourably impressed with the way the modules helped to enrich and motivate their study. The instruction indicated that the modules did not take up much more of time of students.

Hezekiah (1983) developed a teacher’s version of a curriculum module for teaching mechanics to teach secondary school physical students. The goals were outlined; characteristics of the topic and approach were also outlined. In the module suggestions were given how to teach, examples, illustrations and many experiments were based on every common experiences. Major findings were:

- The teachers were excited and impressed by the module and expressed willingness to use it.
- The teachers judged that the approach would motivate students and sustain their interest to learn physics, and

- The module was judged by all the evaluators as good.

Sharma (1982) developed instructional material in civics at 10+2 level for pre-service and in-service teachers. The major findings of the study were:

- 90 percent of students teachers obtained destination marks for modules.

- Majority opined favourably to the different aspect of modules.

- Experimental and control group differ significantly on the test, experimental group being higher, and

- No relationship between sex, age, qualification and teaching experience on modular achievement.

Dyer (1982) developed an art curriculum design using curriculum modules as a means of improving instructions in urban schools. Using instructional modules as a mechanism, this design attempted to provide more scientific guidelines for art instruction. Three self-respondents expressed satisfaction towards the new instruction.

Mason (1982) developed and validated an instructional module to assist the student teachers. Data were collected from 29 teachers from
experimental group who attended a workshop based on the state level competency requirements in West Central Florida. Student teachers knowledge and perception were compared with 24 teachers of the control group who received no treatment. The study revealed that experiment group gained more knowledge than that of the control group. Further proved that this method is helpful in improving attitude towards the handicapped.

Hopper (1982) examined the effectiveness of the three modular approaches on the Biology achievement of $X^{th}$ standard students of three higher secondary schools in Madras.

Smith (1982) developed and validated an instructional module to increase teacher competency in teaching content area reading comprehension skills and found that a low positive correlation in teaching experience and the knowledge of content area. Further the investigator claimed that ‘t’ test for correlated samples revealed a significant difference.

Hopper (1982) conducted an experimental study in the use of modular approach for teaching biology in Standard XI. The aim was to develop six instructional modules on selected units in Biology and structure three modular approaches to find out the effectiveness of the structured modular approaches and modular courses of study on the cognitive achievement of the learners. The main findings of the study were:

- Modular approach of teaching was effective for cognitive achievement.
- All structured modular courses of study were effective with reference to the retentivity of the content and objectives.

- Modular course of study contributed to significant increase in academic motivation of the students.

- Students favoured modular approach involving self learning and peer group learning, and

- Students strongly reported that they had enjoyed modular instruction in biology.

Nirmala (1981) prepared and compared supervised study module with text book approaches in teaching biology in high school and found that supervised study module is more effective than that of traditional method of teaching biology. Further proved that in cognitive level such as, Knowledge, Comprehension, Application and Skill are significant.

Gabriel and Pillai (1981) conducted a study which reports an attempt to modularize learning at college level in India. A difficult unit in Biology was identified and modular learning material was developed, using local resources. The effectiveness of this approach over the traditional teaching approach in terms of learning efficiency, learning time and mastery level is reported. The students who experienced modular scheduling were found to be superior in understanding of concept and retention of concept.

Mukhopadhyay (1981) studied on microteaching vs modular approach. The objectives were:
To study the development of selected teaching competencies through microteaching and modular approaches, and

- To compare the effectiveness of microteaching and modular approaches in developing selected teaching competencies.

The major findings of the investigation were:

- In questioning, ten from each group satisfied the criterion referenced test, whereas on reinforcement from the microteaching group and seven from modular approach group satisfied the criterion reference test, and

- Both the treatments were equally effective.

Fantaski (1981) designed, developed and validated two audio-visual in-service training modules for boards of school director. A system approach was utilized in the design component. Modules were field tested by 50 school board members of Pennsylvania. The conclusions of the study were:

- Participating school board members demonstrated significant gain in mean attitudes from pre-to-post-testing, and

- The effectiveness of the modules as a medium for the in-service training of school board members was established.

Sahajahan (1980) developed and measured the effectiveness of modules as an instructional method with that of conventional method in Daca City in Bangladesh. Data were collected through achievement test,
module evaluation check-list and attitude scale. Statistical techniques such as ‘t’ test and chi-square test were used for identifying the significant difference between the groups. The findings showed that modular approach of instructions are found more effective than that of conventional method. Further majority of the students as well as the teachers showed a favourable attitude towards modular approach of instruction.

Main (1980) conducted an experimental study on teaching science in standards VI and VII through modules. The results revealed that in some areas of teaching science in standards VI to VII modules were found to be more effective than the conventional method. Besides modules were much enjoyable to the learners, and they thought that the modules were better to meet their individual need. The study also revealed that the student shave favourable attitude towards modules as a method of instruction.

Vaughan (1977) were conducted experimental study to measure the effectiveness of modules self method and found that there is significant difference in the total score of knowledge of the experimental group over control group.

STUDIES RELATED TO ACADEMIC ACHIEVEMENT

Arora (1992) studied the interaction effect of creativity and intelligence on emotional stability, personality adjustment and academic achievement. The study deals with the relationship between creativity and intelligence and the interaction effect of emotional stability on personality
adjustment and academic achievement. In the study seventy subjects studying in Standard XII were chosen from two boys and two girls intermediate college in Aligarh city by random sampling technique. The results found that there is a positive correlation of interaction effect and intelligence on academic achievement.

Kaur, Parinder (1992) studied the relationship among creativity, intelligence, and academic achievement in different subjects of tenth grade students 300 girls and 300 boys (150 each from rural and urban area). The study revealed that the male and female intelligence was positively related with achievement in all subjects.

Bed, Madhu and Grewal, Hirdai, Pal (1990) studied the relationship between study habits and academic achievement of undergraduate home science final year students. The major findings of the study revealed that home environment of the student and planning of the schedule was significantly related to academic achievement.

Devil, Ulwala (1990) studied the pupil’s academic achievement in relationship to their intelligence, neuroticism and locus of control. The sample consisted of 495 students of standard nine selected by random sampling from ten English medium schools in and around Chidambaram. The findings revealed that academic achievement showed a positive and significant correlation with intelligence. Academic achievement has positive correlation with neuroticism.
Mohan, Anand (1988) studied the scholastic achievement as related to self-esteem, feeling of security, depression and text anxiety. The sample contains 300 students of both sex, studied in post graduate college of Jhansi. Major findings indicated that a relationship existed between scholastic achievement and self-esteem. No significant relationship between scholastic achievement and feeling of security.

Ramaswamy, R (1988) made an inquiry into the correlates of achievement. The study aimed at analyzing factors that are responsible for the scholastic performance of class ten students. The study conducted on 72 students of standard ten from 20 schools in Madhura. Major findings of the study found that academic achievement was positively correlated with personality, achievement motivation, self concept, study habit and socio economic status among high and low achieving boys and girls.

STUDIES RELATED TO SOCIO-ECONOMIC STATUS AND INTELLIGENCE

Deary et al. (2007) conducted a study on intelligence and educational achievement. The results of the study were: There is a correlation between a latent intelligence trait (Spearman’s “g” from CAT2E) and a latent trait of educational achievement (GCSE scores) was 0.81. General intelligence contributed to success on all 25 subjects. Variance accounted for ranged from 58.6% in Mathematics and 48% in English to 18.1% in Art and Design. Girls showed no advantage in “g”, but performed significantly better on all subjects except Physics. This was not due to their better verbal ability. At
age 16, obtaining five or more GCSEs at grades A*-C is an important criterion. 61% of girls and 50% of boys achieved this. For those at the mean level of g at age 11, 58% achieved this; a standard deviation increase or decrease in a g altered the values to 91% and 16% respectively.

Rushton et al. (2007) examined whether the Roma (Gypsy) population of Serbia, like other South Asian population groups, average lower than Europeans on “g”, the general factor of intelligence. The results indicate the remarkable cross cultural generalizability of item properties across South Asians, Europeans, and sub-Saharan Africans and those these reflect “g” more than culturally specific ways of thinking.

Shukla (2006) examined the involvement of primary school teachers in developing educational audio learning materials. For this the teachers and students together involved in the activity and felt quite friendly, listening songs or story telling is a classroom are seen helpful in developing and refining listening skills among students.

Selvi (2006) concluded that social values, which are cultivated through social intelligence, make the learner to acquire integrative adjustment of self-control, personal, sound responsibility, democratic social interests and ideals.

Panigrahi (2005) conducted a study on academic achievement and its relation with intelligence and socio-economic status of high school students reveals that intelligence has positive effect of the academic performance on
high school students. It is also found that high intelligence leads to better academic success. The relationship between academic achievement and socio economic status were found not significant.

Riasal Ali (2005) measured the effectiveness of modular teaching in Biology at Secondary level and found that modular approach in teaching is more effective in biology when compared to the traditional method of teaching. Further proved beyond doubt that modular approach in teaching are seen more beneficial to law achievers.

Sunil, Dutt and Divender (2002) examined the effect of self-learning modules on achievement in Economics among senior secondary students and found that teaching through self learning module is helpful to achieve higher scores. Further male students are superior in achievement to that of their counterparts. While considering locale there is no significant difference seen n achievement among the students.

Anilakumari, M.C. (2002) evaluated the physics module prepared for standard XI of Kerala state open school and concluded that the module was inadequate for physics learning.

1. Coverage of the syllabus in the module was satisfactory.
2. The physics module prepared was not suitable for self learning
3. The major aims and functions were not satisfied by the module
4. The module was appropriate to the age level of the learner.
5. Mode of presentation of module was not satisfactory.
Bindu (2000) developed a module for in-service training programme for higher secondary teachers for transacting the hard sport areas in biology curriculum and it proved effective.

Reddy and Natarajan (2000) measured the effect of modular approach in learning English of the higher secondary students. The study revealed that the modular approach was more effective than the traditional lecture method in teaching English grammar at +2 level.

Tinglu (1999) prepared and tested a teacher assisted module on preposition in English Grammar for the students of Std IX. The study revealed that modular approach was superior to lecture method for teaching various topics in English in schools.

Thomas (1998) tried to assess the effect of teacher assisted modular approach on achievement in biology of higher secondary students and concluded that the teacher assisted modular approach was more effective than the traditional textbook approach on achievement in biology of higher secondary school students even at knowledge, understanding and application levels.

Mathew (1998) prepared and tested the effectiveness of a large package in zoology for final year degree students on the topic ‘sericulture’ and revealed that the learning package is more effective than textbook in teaching of zoology in colleges.
Lekha (1998) studied the effectiveness of teacher assisted modular approach in teaching mathematics at secondary schools and arrived at the conclusion that it was more effective than traditional method of teaching.

Reddy and Ramar’s (1997) developed and tested the effectiveness of multimedia packages for class VIII science subject with special reference to slow learner sand showed that the multimedia instructional strategy was more effective than the traditional lecture method in teaching science and it enabled the slow learner’s to cope up with normal students to a considerable extent.

Mathew (1997) conducted a study on the effect of teacher assisted modular approach in teaching physics in secondary schools of Kerala state and concluded that teacher assisted modular approach is more effective than the traditional text book approach on achievement at the knowledge, understanding and application levels.

Roy (1997) prepared and tested the effectiveness of a module on ‘sandhi’ in Malayalam for degree students and found that modular approach was superior to traditional method of teaching.

Alice Ani (1997) tried to find out the effect of teacher assisted modular approach on achievement in Chemistry and proved that modular approach is more effective than text book method. Further she proved that Modular approach in teaching is helpful in developing skill among children.
Abraham Jolly (1996) in her study found that modular approach was more effective in achievement of chemistry at secondary school students than that of traditional method.

Varghese Ancy (1995) compared the effectiveness of modular approach with traditional text book approach and found that modular approach is more effective than text book approach. Further she compared the effectiveness under the categories of instructional objectives knowledge, comprehension and application and found that at the knowledge level both methods are equally good, but at comprehension and application levels the modular approach is more effective.

Marrett, Renu (1995) made a support study module for learning the occupational aspects of coconut cultivation, at degree level. The following conclusions were being emerged.

- Traditional method of teaching was not suitable in developing the skills of Botany students at B.Sc. level.

- The module prepared was seen effective in providing knowledge in an integrated fashion.

Hazeena (1995) compared modular approach and traditional text book approach in teaching physics. She found that the modular approach is more effective that that of traditional text book approach.
Prakash (1993) conducted an experimental study with a view to find out the effect of guided self study for learning chemistry and found that experimental group performed better than that of control group.

Grag and Chaturvedi (1992) studied the intelligence and socio-economic status as correlates of academic performance. The study was carried out in 535 students, of which 179 from rural areas and rest from urban areas of Bhopal district. The study revealed that there appeared to be linear relationship between intelligence and academic performance which held good both for rural and urban students. Academic performance is related to socio-economic status and also has linear correspondence.

Chand (1992) found in his study that personal values of adolescent boys and girls in relation to socio-economic status and academic achievement; and that there was no significant correlation between socio-economic status and religious, democratic, economic, knowledge power and family prestige values, but there was significant relationship between socio-economic status and social aesthetic and health values.

Harikrishnan (1992) studied the academic achievement of the students of the higher secondary stage in relation to socio economic status. A sample of 300 students were selected at random. The study revealed that girls get higher achievement than boys and socio-economic status was significantly related to achievement.
Devanesan, Paul (1992) conducted a study on socio-economic status, achievement motivation and scholastic achievement of higher secondary students and found that there was a significant relationship between socio economic status and scholastic achievement.

Soona, Ramana (1991) conducted a study on academic achievement of pre-engineering students in relation to their socio-economic status. He found that there was no significant relationship between academic achievement and socio-economic status.

Sumitra (1991) has presented a case study of the audiocassette project of Hoshangabad (M.P.) for teaching Hindi. The salient outlines of the study areas follows: (1) Low cost two in one sets have limited life and they need proper budgetary provisions for running and maintaining them (2) Children when interviewed showed their happiness about the programmes and wanted to listen to more of such programmes (3) The best liked programmes were those, which had segments of songs, stories, questions, and activities.

Mollykutty (1991) measured the effect of modular approach in teacher education and requisites for implementation. It was found out that modular approach is more effective than that of traditional approach. The study suggested to provide more facilities in educational institutions for the effective implementation of modular approach in teaching.

Arunachalam (1991) developed an instructional module for learning history for students of standard X and found that the experimental group scored higher in achievement. As far as the total group is concerned, the use
of instructional module improved the level of learning of history. Further it is seen that instructional module is superior to the traditional approach for the attainment of knowledge, comprehension, application and skills.

Sansanwal and Joshi (1990) conducted an experimental study to measure the impact of specially designed instructional strategy on higher mental abilities of school children. The specially designed instructional strategy consisted of six components namely, programmed learning materials, experimentations, assignment and discussion. The sample consisted of 100, IX standard students and were divided into two groups. Experimental and control groups. The results of the post-test showed that the instructional strategy developed by the investigator was found superior to the traditional approach for developing various abilities such as application, analysis, synthesis, evaluation and overall higher mental ability in science.

Santhosh Kumar (1990) tried to measure the effect of teacher assisted modular approach in teaching physics at secondary school level of Kerala state. The findings showed that the teacher assisted modular approach is more effective than text book approach for student achievement in teaching physics.

Madhumohan (1990) tried to identify the effect of teacher assisted modular approach in teaching chemistry in secondary schools of Kerala. The study revealed that the teacher assisted study module is more effective than text book approach in teaching of Chemistry of high schools.
Madhumohan (1990) conducted a study in Chemistry on the effectiveness of teacher assisted modular approach in teaching secondary school students of Kerala. It was found that the teacher assisted modular approach was more effective than the textbook approach in teaching Chemistry in secondary schools.

Arockiam (1990) developed a self learning package on the skills to ask questions. A group of teachers was trained on the questioning skills through the use of the package. The study showed that teachers improved their questioning skills and the self learning package was found more effective.

Kumar (1990) conducted a study on the effect of teacher assisted modular approach in teaching physics in secondary schools of Kerala state and concluded that the teacher assisted study module was more effective than text book approach in teaching physics at knowledge, understanding and application level.

Usha (1990) conducted a study on preparing and evaluation self instructional film strips on nutrition and found that on the recall test (knowledge) those students got higher score who studied alone with the help of self-instructional filmstrips. On other objectives understanding, application and skill—the gain score was found to be significant for all the three treatments.
Padhan (1990) in his study on creative thinking in relation to socio-economic status and scholastic achievement of the higher secondary students of Baroda city found that there was no significant relationship between creative thinking and socio-economic status.

Ganguly, Malabika (1989) found in her study on socio-economic status and scholastic achievement that the mean achievements scores of the SES group of urban areas in all the three groups of subjects differed significantly from those of the lower groups. The upper SES groups had done better in all these and were found to be significant.

Anitha (1989) in her study on preparation of modules for teaching the topic ‘Analysis of Basic Data in Basic Mathematics for Standard VIII, and found that the modular approach is more effective than traditional method.

Sunsammal (1989) conducted a study on the relationship between creativity, and its components with different trends of intelligence and academic subjects among high school students. She found no significant difference among science and commerce made students in creativity.

Kaile, Harnek Singh (1988) conducted a study on intelligence and creativity as predictors of scholastic achievement in Mother tongue and foreign language at different levels of socio economic status. He found that the measures of intelligence and creativity had more or less identical relationship with scholastic achievement in mother tongue and foreign language for the total sample as well as the three SES groups, ie. high, average, and low.
Devi (1988) examined the test anxiety and intelligence as factors affecting performance on a linear programme and found that the high test anxiety students perform letter on the criterion test than the students belonging to low test anxiety group.

Tivedi, Vineeta (1988) in her study of the relationship of parental attitude, socio-economic background and the feeling of security among the intermediate students and their academic achievement found that there existed a significant relationship among prenatal attitude, socio economic status and academic achievement.

Jayalakshmi (1985) developed and investigated the effectiveness of instructional modules in educational psychology for B.Ed. students. The study revealed that the prepared module was effective in studying educational psychology of B.Ed. students.

Kothari (1985) examined the efficacy of different instructional media in the teaching of Mathematics to the pupils of class IX. The results clearly indicated that the visual projection was comparatively more effective than any other media like activities and experiment or even programmed learning material. The low achievers were comparatively more benefited by programmed learning than the high and average achievers.

Pankiewicz (1984) developed module with a view to assess it in terms of its effectiveness and applicability. The experimental group studied
in traditional way revealed that experimental group gained high in post test scores. Sex and I.Q. were not influencing their achievement.

Miller (1983) studied the effect of computer oriented modular approaches in learning abstract algebra. The sample consists of 26 students and found that students favoured modular approach.

Shah (1981) conducted an investigation on the effect of teaching strategies on the development of creative thinking and achievement in science. The study revealed that there was a significant difference between the four selected strategies in developing creative thinking and achievement in science.

Shylakumari (1980) examined the relationship between intelligence and anxiety on the science achievement. The study reveals that there is no significant relationship between both verbal and intelligence and examination.

Chopra (1970) conducted a study on measured intelligence and academic achievement as related to cultural atmosphere in the house. The study reveals that better educated parents take greater interest in the studies of their children. The cultural atmosphere of the house of the pupils influence their academic achievement.

CONCLUSION

From the reference of empirical studies, the investigator concluded that modular approach in teaching is more effective than that of the existing
method. Further the investigator could gain valuable and systematic information regarding the rules and procedure to be adopted for preparing modules. Moreover, the references of empirical studies enabled the investigator to identify a suitable research design which are presented in the next chapter.