Chapter – 2

REVIEW OF RELATED STUDIES

STRENGTH OF EVERY WORK DEPENDS UPON THE FOUNDATION.

Literature in any field forms the FOUNDATION upon which the PROGRESS of future work depends.

Acc. to Oxford Advanced Learner’s Dictionary of Current English (2005), “Review means a careful examination of something.” The careful examination of related literature provides thorough understanding about the research which is to be done and helps the researcher to know about various techniques and methods used by the researchers. Review provides valuable ideas to formulate the STATEMENT OF THE PROBLEM. It helps in efficient and sound planning of the research work to be conducted and it is always said that WELL PLANNED IS HALF DONE.

Review of related literature is an important part of any research work. It explores and analyses the research work already carried out in the related field of study. The past study becomes the foundation upon which present research can be carried out.

2.1 IMPORTANCE OF REVIEW OF RELATED LITERATURE

1) It helps the researcher to define the problem.

2) It updates the knowledge of the researcher.

3) The researcher can avoid unintentional duplication of well established generalisations.

4) The review of related literature provides the researcher an understanding of
the research methodology which refers to the way the present study is to be conducted. It helps to select tools for collection of data as well as for choosing appropriate statistical methods.

5) It helps to provide various valuable suggestions given by previous researchers for further research.

6) It helps in overall planning of the present study. Planning is deciding in advance: What to do, Why to do, How to do, At which time and With how much resources. Review of related literature gives answers to all these questions such as what to do (Statement of the problem), why to do (Need of the study), how to do (Research Methodology), at which time (When to collect data and information) and with how much resources (Time and Money required).

2.2 STUDIES IN ABROAD

Following researches have been done in abroad and found supporting for the present study:

**Greager and Murray (1991)** offered Modules to the teacher. They found that the Modules helped the students to learn as well as provided better chances to the students to interact with the teacher because this self learning material reduced the routine instruction time.

**Aggabao (2002)** developed Individualised Self Instructional Modules on Selected Topics in Basic Mathematics for Instructional use at the Teachers’ College in Isabela State University. After making use of the experimental method, it was concluded that
the students as well as teachers have a positive attitude towards the use of self-instructional material as a mode of instruction in Basic Mathematics.

**Abutarbush et. al. (2006)** conducted a study on Evaluation of Traditional Instruction versus a Self-Learning Computer Module (SLCM) in Teaching Veterinary Students to Pass a Nasogastric Tube (NG) in the Horse. Students in the SLCM group performed significantly better on the test of knowledge than traditionally instructed students. In hands-on skill, time to pass the NG tube successfully was significantly shorter in the SLCM group than in the traditionally instructed group. The data from focus-group sessions suggested that while participants expressed satisfaction with both modes of instruction, the SLCM group reported somewhat higher levels of confidence in their skills prior to perform the procedure. The traditional group reported a strong preference for continued live demonstrations of the procedure. The SLCM group stated that the computer-assisted module alone provided them effective instruction. It was concluded that the computer-assisted learning is an acceptable and effective method of training students to pass a NG tube with potential welfare, proficiency and knowledge advantages.

**Mak & Georges (2007)** carried out a research on the benefits of self-paced learning modules for teaching quantitative methods in environmental science. It was a multiple-indicator evaluation of an innovative approach, using self-paced learning modules accompanying computerised exercises as an adjunct to teaching quantitative concepts and skills to environmental science students at university. The evaluation data, based on a pre-unit and a post-unit questionnaire survey completed by 38 students, showed high levels of students satisfaction with the unit as a whole and the self-paced workbooks in particular. Students also indicated a clear preference for
learning from self-paced workbooks compared to learning from textbooks. Some students applied the quantitative skills acquired to other academic units or took the initiative to learn to use additional statistical procedures (not covered in the unit) for academic purposes.

Ali et al. (2010) conducted a study on Effectiveness of Modular Teaching in Biology at Secondary Level. The major purpose of the study was to explore the impact of modular teaching on the achievement of students. The study was of experimental type. Equivalent group study design was used. The collected data of both groups were analyzed and interpreted using mean, standard deviation and t-test and conclusions were drawn. The results of the study were in the favour of modular teaching approach, therefore, it was suggested that this approach should be widely used in conventional classroom at various levels of education.

Khalil, Nelson and Kibble (2010) conducted a study on the use of Self-learning Modules to Facilitate Learning of Basic Science Concepts in an Integrated Medical Curriculum. This study used qualitative and quantitative approaches to evaluate the effectiveness of self-learning modules (SLMs) developed to facilitate and individualise students' learning of basic medical sciences. Twenty physiology and nineteen microanatomy SLMs were designed with interactive images, animations, narrations and self-assessments. Out of 41 medical students, 40 students voluntarily completed a questionnaire with open-ended and closed-ended items to evaluate students' attitudes and perspectives on the learning value of SLMs. Closed-ended items were assessed on a five-point Likert scale (5 = high score) and the data was expressed as mean ± standard deviation. Open-ended questions further evaluated students' perspectives on the effectiveness of SLMs. Students responses to open-
ended questions were analysed to identify shared patterns or themes in their experience using SLMs. The results of the midterm examination were also analysed to compare students performance on items related to SLMs and traditional sessions. Students positively evaluated their experience using the SLMs with an overall mean score of 4.25 (SD ± 0.84). Most of the students (97%) indicated that the SLMs improved understanding and facilitated learning basic science concepts. SLMs were reported to allow learner control, to help in preparation for subsequent in-class discussion and to improve understanding and retention. A significant difference in students' performance was observed when comparing SLM-related items with non-SLM items in the midterm examination.

**Garillos (2012)** conducted a study on Development and Validation of Instructional Module in Biology for Second Year High School Students. It was found that there was a significant increase in the post-test results of the students when the instructional material was introduced in the class.

**Douglass et. al. (2014)** studied the Influences of Web-based Learning Module on Student Pharmacists’ Confidence and Competence in Pain Management. The objectives of the study were to compare the confidence and competence in pain management skills between student pharmacists at the end of their didactic and experimental years and to examine the potential influence of a web-based experimental learning module on students’ confidence and competence skills. Two groups of students were surveyed at the end of the third (P3) and fourth (P4) professional years to assess their self-reported confidence and competence on four pain management skills. During the second year of the study, students were asked to complete a web-based learning module aimed at improving competency in pain
management. Confidence and competence measures were compared for each group with a Fisher’s exact test. Students were more confident than competent on all four pain management skills evaluated and overall competence between both class years was suboptimal. Competence in pain management declined among P4 students who did not complete the learning module.

Guido (2014) conducted a study on Evaluation of a Modular Teaching Approach in Material Science and Engineering. The challenge of this study was to use the modular teaching approach in engineering. A standardised faculty - student instructional module evaluation checklist was used for the assessment of the learning objectives, evaluation of acceptability, effectiveness and the acquired skills in the module. The study showed that the instructional module in material science and engineering were effective for students’ knowledge adaptation and showed suitability to the level of the students and acceptability to the faculty evaluators. This revealed that the evaluators trusted that the module was very valuable to the course which made students’ learning experience well stimulated.

Gagnon et. al. (2015) conducted a study on Adaptation and Evaluation of Online Self-learning Modules to Teach Critical Appraisal and Evidence-Based Practice in Nursing. This study was designed to evaluate online self-learning modules on critical appraisal skills to promote the use of research in clinical practice among nurses from Quebec (Canada) and the Basque Country (Spain). The teaching material was developed in Quebec and adapted to the Basque Country as part of an international collaboration project. A prospective pre-post study was conducted with 36 nurses from Quebec and 47 from the Basque Country. Assessment comprised the administration of questionnaires before and after the course in order to explore the
main intervention outcomes: knowledge acquisition and self-learning readiness.
Satisfaction was also measured at the end of the course. Two of the three research hypotheses were confirmed: (1) participants significantly improved their overall knowledge score after the educational intervention and (2) they were, in general, satisfied with the course, giving it a rating of seven out of 10. Participants also reported a greater readiness for self-directed learning after the course, but this result was not significant in Quebec.

Hoogenes et. al. (2015) conducted a study named Student-led Learning: A new Teaching Paradigm for Surgical Skills. Twelve first-year orthopedic residents were randomised to either a student-led (SL) or a traditional instructor-led group during an intensive, month-long, laboratory-based technical skills training course. A rigorous qualitative-description approach was used for analysis. Four prominent themes emerged: instructional style, feedback, peer and instructor collaboration and self-efficacy. Compared with the instructor-led group, there was more peer assistance, feedback, collaboration, hands-on and active learning observed in the SL group. The flexible and socially rich nature of the SL learning environment may aid in development of both technical and nontechnical skills early in residency and ultimately privilege later clinical learning.

Wei Li (2016) conducted a case study “Transforming Conventional Teaching Classroom to Learner - Centered Teaching Classroom Using Multimedia-Mediated Learning Module.” This case study was conducted at INTI International University, Malaysia where it realised the limitations of conventional teaching and had taken initiatives to encourage lecturers to adopt a more learner-centered teaching approach. It was noted that the learner-centered teaching environment successfully helped
students to gain better understanding, made the learning process more interesting and engaging as compared to conventional teaching.

2.3 STUDIES IN INDIA

This part highlights the research studies conducted in India. Those are given below:

**Dhamija (1985)** compared the Effectiveness of the Three Approaches of Teaching namely Conventional, Radio-vision and Modular on the Achievement of Students in Social Studies. The mean achievement scores of students in Civics when taught through Modular approach were more than the mean achievement scores of students when taught through Radio-vision as well as Conventional approach. It indicated that Modular approach was more effective in teaching Civics in comparison to Radio-vision and Conventional approach.

**Mollykutty (1991)** conducted research on the Effectiveness of Modular Approach in Teacher Education and requisites for implementation. The objective of the study was to test the effectiveness of modular approach in Teacher Education. It was found that the achievement of trainees through modular approach was significantly higher than achievement through existing approaches adopted in teacher education institutions.

**Dutt (1998)** conducted a research to find out the Effect of Self Learning Modules on Achievement of Senior Secondary Students in Relation to their Sex and Place of Residence. It was found that male students got significantly higher mean post achievement test scores than female students through Self-learning Modules. Students belonging to both rural and urban places of residence achieved almost identical mean post achievement scores.
Kumari (1998) carried out a research to see the Effectiveness of Remedial Modules in Language Learning in Minimum Levels of Learning Curriculum. The objectives were to diagnose specific inadequacies in mastering over different competencies of Minimum Level of Learning in languages as well as to find out the effectiveness of remedial modules with respect to various competencies of mastery over language.

Remedial module for class III, IV and V were found effective. These helped the students to attain mastery level in desired skills of language.

Nath (1998) developed and validated self instructional package for Secondary School Biology teachers for their in-service learning. The objectives of the study were to develop Self-Instructional Material (SIM) in a Package with reference to the necessary content to fill up the gaps in the updated knowledge of secondary school Biology teachers in their in-service learning and to validate the developed package by ascertaining its effectiveness. It was found that 37 percent of teachers had achieved marks in the range of 61-80, 44 percent of teachers achieved more than 80 and 19 percentage secured marks in the range of 54-60. None of them had secured below 50 marks. 81 percent of teachers achieved more than 60 percent marks. The mean percentage score in the achievement test was 67.

Arya (1999) compared the Instructional Strategy with Traditional in terms of selected cognitive variables. The objectives of the study were to develop the instructional strategy and study its effectiveness in terms of students’ performance on criterion tests and comprehensive test. The developed Instructional Strategy was found to be effective in terms of achievement of students on criterion test and comprehensive test. The developed Instructional Strategy was found to be
significantly superior to traditional method.

**Marathe (2000)** carried out a research on the Nutrition Communication: Development, Testing and Evaluation of Modules for Community Use. The objectives of the study were to gauge the knowledge, attitude and practices of mothers with respect to protein, energy, malnutrition and vitamin A deficiency and to assess the effectiveness of the nutrition communication modules in the community. It was found that the nutrition communication modules were very effective in raising knowledge, modifying the attitude and adopting health-promoting practice among the community mothers.

**Ahuja (2002)** studied the Effect of Self - Learning Modules on Achievement in Environmental Education in relation to Altruism and Emotional Intelligence. It was found that the students taught through Self- learning Modules (SLM) strategy gained more environmental education concepts than those taught through Conventional Method. Thus SLM strategy proved to be superior to Conventional Method for teaching environmental education concepts. Altruism accounts significantly for differential achievement in environmental education than those with low altruism. Interaction between teaching strategies and varying levels of altruism found to be significant in producing differential achievement scores. Students with high altruism gained more concepts in environmental education than those with low altruism under SLM strategy.

**Chopra (2002)** developed a Self-Instructional Module to Enhance Communication Skills of College Principals. The objectives of study were to develop a self-instructional module in ‘communication’ for college principals. Self-instructional
module in ‘communication’ was administered on the college principals for self-study and to evaluate the usefulness of the module through self-appraisal and feedback by college principals. It was found that the ‘communication module’ has definitely proved useful to college principals to enhance their communication skills and competence to optimally perform at work. The respondents had found the sequencing and flow of the module logical and smooth and could work through the module within the time frame allotted by researcher of eight to ten weeks.

Rastogi (2003) developed Self Instructional Material on Educational Statistics for B. Ed. students. In this experimental research, a comparison was seen between two strategies as Traditional Classroom Teaching and Self-Instructional Material. The statistical analysis revealed that a significant change in level of knowledge regarding Educational Statistics was obtained in both the groups. Also, learning in both the groups was enhanced to a significant level and there was more retention through Self Instructional Material strategy. This indicated that Self Instructional Material strategy was more effective than Traditional Classroom Teaching strategy.

Shetty (2004) developed a Self-Instructional Module on Staff Development for the Secondary School Principals. The objectives of study were to develop instructional material on self - development for secondary school principals and to evaluate the effectiveness of the instructional material on staff development for secondary school principals. It was found that the modules helped the Principals to enhance their abilities of organisational management. These helped the principals to have better and effective communication, wherever required technology was used. They were active listeners, effective negotiators and were able to conduct meetings effectively after learning the various techniques of communication from the modules.
Arora & Singh (2005) conducted research on Development and Evaluation of Self-Learning Modules to enhance the Traditional Physiology Class at CMC Ludhiana. The results indicated that Self-learning Modules were an effective method of studying and reinforcing learning. Comparison with other teaching methods indicated that the students would prefer Self Learning Modules as an additional method of learning but not a replacement for lectures and text-books. Students recommended that SLM experiment should continue and suggested SLM library for self study.

Puri (2009) carried out a study on Effect of Self-Learning Modules on Environmental Awareness in Elementary School Students Belonging to Different Socio-Economic Status and School Systems. It was found that Self-Learning Modules proved effective when compared to Conventional teaching in Private, Gurukul and Govt. schools.

Bala (2013) carried out a study entitled “Effect of Computer based Multimedia Instruction versus Conventional Teaching on the Achievement and Retention of Students in Science at Secondary School Stage”. It was found that the computer based multimedia instructional material was effective for teaching Science to students than conventional teaching. Another outcome of the study showed that the students exposed to computer based multimedia instruction retained higher total scores in Science than those taught through conventional method.

Dhamija (2014) carried out research on the “Effectiveness of Self-learning Modules on the Achievement of Elementary School Students in the Acquisition of Concepts in English Grammar”. It was found that Self-learning Modules proved effective for
enhancing the acquisition of concepts in English Grammar among students of VIII class. Another finding of the study revealed that students retained the concepts in English Grammar in a better way when they were taught through Self-learning Modules in comparison to conventional teaching.

Researches conducted in abroad and India highlighted the effectiveness of self learning material as compared to traditional method of teaching in terms of achievement as well as retention. Self-learning Modules boosted the satisfaction level and confidence of students. Conceptual clarity was enhanced to a noticeable level through this mode of teaching. Review of related literature also indicated the want of researches on effectiveness of Self learning Modules in terms of achievement and retention as compared to conventional mode of teaching at undergraduate level for teaching Business Management which is branch of Commerce. Keeping this in mind, the present study was planned and executed.