CHAPTER-III

REVIEW OF RELATED LITERATURE
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The investigator made an extensive search for the existing literature with a view to finding links with the already existing findings. Since learning disability is a vast area, a number of studies are available. The investigator has focused on only one aspect that is directly related to the present study. It is the intervention programmes and their effectiveness. The studies in this area are reviewed noting the major findings.

Lee (1992) investigated the effectiveness of a novel teaching method for helping students solve one step Mathematics word problem. The sample for the study consisted of 4th, 5th and 6th graders with specific learning disabilities in Mathematics. The results revealed significantly better scores in the skill of choosing correct operation in subtraction and addition word problems.

Ryan (1989) compared the achievement levels, skill mastery rates, learning strategies and attitudes of 16 learning disabled and 16 non-learning disabled eighth graders of similar intelligence. The course was individualized so that each subject had access to a set of materials. The results indicated that the learning disabled with reading disability could master computer literacy skills in the regular classroom environment if given the opportunity to ask questions to teachers and peers. They apparently seek responses that provide them with information and reinforcement.
Bartz (1989) conducted a study in the use of writing and self-monitoring strategies by learning disabled eighth graders. Strategies in capitalization, punctuation, sentence completion and self-monitoring were introduced and practised. Results revealed significant improvement in vocabulary, thematic maturity and handwriting during the period of strategic instruction.

Cole (1992) investigated the effectiveness of an instructional intervention which was designed to teach students with learning disabilities to write a sequential expository paragraph through strategic instruction and the use of a set of instructional writing framework. Sample consisted of twelve students of 3rd, 4th and 5th graders. Results indicated that the three groups of students attained criterion performance levels in writing and increased fluency over the baseline levels.

Walker (1987) investigated the effectiveness of two different methods of teaching learning disabled middle school students how to solve one step addition and subtraction and mathematical story problems. This study also compared the generalization of the two instructional methods to problems written in syntax that required the performance of two mathematics operations, subtraction and addition.

Bhattacharya (1985) tried out a technological approach for alleviation of learning disabilities of the students in life science. Results of the study indicated that learning through audio-visual materials and techniques caused prolonged retention than by traditional methods.
Bhattacharya (1982) conducted a study in diagnosing and preventing learning disabilities of primary school students in Arithmetic. He found that learning through audio-visual methods caused prolonged retention than traditional methods.

Kim (1998) compared two instructional methods for teaching spelling to elementary students with learning disabilities to find out the most effective and expedient way to increase the overall spelling performance. The treatment group was taught using rule-based strategy instruction focusing on teaching students in spelling rules. The control group was taught in the traditional way that provided an array of spelling instructions. The overall performance indicated that rule-based strategy instruction focusing on teaching students in spelling rules was significantly effective in increasing the spelling performance.

Maccini (1998) investigated the effects of an instructional strategy within a graduated sequence involving the use of Algebra lab gear on the representation and solution of problem solving skills encompassing integer numbers for secondary students with learning disabilities. Results showed that the ability to apply problem solving skills involving integer numbers dramatically improved following instruction at the concrete, semi-concrete and abstract levels.

Xin (1993) investigated the effects of using video-technology as a tool for facilitating disabled students’ vocabulary learning and reading comprehension. Seventy 4th, 5th and 6th grade learning disabled students receiving reading instruction in special education resource room were randomly assigned to a video-nonline video group to learn 30 vocabulary words for a period of 6 weeks instruction.
The video group performed better in oral recall and application of target words than the non-video group.

A study to compare constant time delay and prompt fading to teach multiplication facts to learning disabled students was conducted by Collins (1989). Three students participated in the study. For one subject acquisition of multiplication facts was a function of fading technique approach. For the 2nd and 3rd constant time delay produced better results.

A study was conducted by Faieta (1989) to compare two instructional techniques, sentence writing versus tutorial in teaching College students identified as learning disabled. Sample consisted of 12 college freshmen. Results revealed that sentence writing learning strategy was effective in teaching college students with learning disabilities.

Some of the researchers tried to determine the effect of instructional methods based on modern theories of learning and self-study approaches. Their studies examined the effect of advance organizer, peer-tutoring, computer assisted instruction and strategies for cognitive skill development.

Bryan (1999) investigated the impact of planning pyramid on teachers and students with and without learning disabilities. This study examined (a) the lesson procedure and instruction used by the teachers before and after Planning Pyramid instruction and (b) learning behaviour and social studies content knowledge acquired by students with and without learning disabilities. This was a multiple case study consisting of three teachers and two students one with and another without learning disabilities in fifth grade general education social studies class.
Results of the study revealed that all students with and without learning disabilities demonstrated gain in their ability to respond to explanation type questions and one student with learning disabilities increased his social studies content knowledge.

Butler (1994) investigated the effectiveness of an intervention programme designed to promote self-regulated learning, strategic content learning. In strategic content learning, rather than teaching students specific cognition strategies, instruction focuses on supporting students to approach learning tasks strategically. The study was composed of six parallel case studies of adults with learning disabilities enrolled in post secondary education programme. Results of the study indicated that in all case students' performance on their chosen task improved.

Newben (1998) investigated the effect of service delivery alternatives on the efficiency of instructional strategy taught to students with learning disabilities. A paraphrasing strategy was implemented. The result indicated that strategy instruction improved the performance of students with learning disabilities.

Peer tutoring is considered as one of the effective techniques of helping students in their studies. Would the learning disabled be benefited?

Singh (1981) studied this problem by investigating the effects of peer tutoring in Mathematics skills of learning disabled students. The major question the study attempted to answer was whether the learning disabled who received peer-tutoring made significant gains in Mathematics computation and in the application of Mathematics concepts over the learning disabled pupils who did not receive peer tutoring. Results indicated that peer-tutored group of LD students
made significant gains in both Mathematics computation and Mathematics concepts application scores over the non-peer tutored students.

Utay (1992) undertook a study to examine the effects of combining cross-age tutoring, peer tutoring, co-operative learning and computer mediated writing together referred to as Peer Assisted Learning (PAL) to improve the writing skills of second through sixth graders with learning disabilities. Though the treatment groups did not score significantly higher than the control groups, they seemed to enjoy working with the partners. They asked their partners help before asking their teachers.

Gilberts (1999) investigated the effects of self monitoring instruction delivered to students by peers on the participation of students with severe learning disabilities in the general education setting. Peer tutors' delivery of self-monitoring strategies was found to be accurate and effective and did not disturb the classroom environment.

Wilson (1998) investigated the ability of general education middle school students to prompt and reinforce skill acquisition of peers with moderate to severe disabilities in the context of content area co-operative learning instructional settings. Results indicated that the general education students learned to provide the identified opportunities, reinforcement and prompt sequences to their peers with learning disabilities. The tutors and tutees felt positive towards their participation.

Higgins (1982) investigated the effects of peer-tutoring and independent study on increasing the spelling performance of eight adolescents in a self-
contained class for students with learning disabilities. Significant increase in spelling performance was found during treatment when retention was measured. Serving as a tutee than serving as a tutee resulted in higher spelling performance during treatment and in the retention of learned words.

Lowe (1992) investigated the effectiveness of a peer mediated constant time delay procedure to teach spelling to college students with learning disabilities. Results indicated that peer mediated constant time delay procedure was effective in teaching spelling to the tutees. The tutoring experiences were less effective in teaching spelling than the direct instruction model.

Lenz (1983) conducted a study on the effect of advance organizer on the learning and retention of learning disabled adolescents within the context of a cooperative planning model. The investigator examined whether advance organizers would make the LD adolescent more efficiently receive select and process important versus unimportant information on selected tasks. The sample consisted of 105 LD and 114 ND students. Results indicated that advance organizers could exert a positive qualitative influence on the learning of LD adolescents.

Bukatman (1981) conducted a study on the effects of computer assisted instruction for mastery of multiplication of facts on learning disabled elementary school children differing in locus control. Results revealed that students possessing an internal locus control were able to learn more independently with less teacher intervention and direction than those who possessed an external locus control.

Copper (1979) studied the effects of adapted materials and teaching techniques on content learning by secondary school learning disabled students.
The study examined the effects of auditory presentation and rewriting stories in the literature content learning of secondary school children. Experimental group performed at significantly higher level in those of rewritten stories.

Donalson (1982) studied the effect of verbal rehearsal and visual imagery on the performance of learning disabled and normal students. The sample consisted of 120 age matched LD and normal learners. The major finding was that neither trained treatment significantly enhanced student performance. The attempt to impose strategies was simply less effective than the learners' native strategies.

Harris (1981) investigated the effects of cognitive training and self-speech on task performance during problem solving among learning disabled and normally achieving children. The sample consisted of thirty learning disabled and thirty non-disabled children. The major finding was that the proportion of self-speech that was task relevant was significantly higher in cognitive training group.

Mahajan (1994) investigated the effects of enhancing cognitive functioning through training in verbal and non-verbal tasks. The sample consisted of thirteen learning disabled students of grade IV. Results of the study revealed that training in verbal and non-verbal tasks had positive significant effect on enhancing cognitive functions. Use of verbal prompts and cues helped the fourth grade LD children improve their performance from pretest to posttest in classification and categorization.

Ward-Lonergan, M.J., Liles, Z.B., & Anderson, M.A. (1999) investigated the verbal retelling abilities in adolescents with and without language-learning disabilities for social studies lectures. Verbal retelling abilities were examined and
compared in 20 adolescent boys with learning disabilities of 5-12 and 7-14 ages. Results indicated that the comparison discourse structure facilitated more substantive and elaborate retellings.

Brown (1989) studied the effect of mnemonic instruction upon retention of vocabulary with learning disabled children. Three methods were used (a) semantic mapping, (b) semantic mapping keyword, and (c) self-selection which allowed students to choose their own memory strategies. It was revealed that semantic mapping key word recalled more vocabularies and the other groups improved in their vocabulary.

Mehring (1981) investigated the interaction among three cognitive styles and aptitude variables, (vocabulary, field dependence-independence and locus control) and a learning strategy that employs self questioning to teach main ideas and relevant details of reading passages, written and reading achievement to junior high school LD students. The self-questioning strategy was effective at improving the ability to recall the main ideas and details regarding reading achievement.

Rath (1995) examined the differential efficacy of verbal self-instructional training on reflective and impulsive reading disabled tribal and non-tribal children. Results showed that verbal self-instructional training has been very effective for non-tribal children and those having reflective cognitive style but failed to yield desirable results for the tribal and impulsive children.

White (1998) reviewed the research on cognitive learning strategy interventions for learning disabled students, in two topical areas of reading and mathematics. Overall interventions in both topics were effective with the LD
students. The results revealed that the interventions were most successful at the elementary and junior grade levels in reading while interventions were most successful at the junior and senior levels in mathematics.

Bhattacharya (1977) conducted a study to diagnose the detailed patterns of disabilities in students in specific areas of algebra and to try out the teaching methods that would prevent development of learning disabilities in Algebra. The preventive measure included teaching through audio-visual methods. Results revealed that teaching through audio-visual methods was effective and it helped in increased motivation and retention.

Schunk & Cox (1986) compared the effects of different forms of verbalization among students with LD during mathematics instruction. Continuously verbalizing a strategy while solving problems led to higher self-efficacy and skill compared with discontinued verbalization or non verbalization.

Courson, (1989) compared the effectiveness of short and long form of guided notes on social studies performance by seventh grade learning disabled and at risk students. The results revealed high scores for both the groups.

Scott (1993) examined the effectiveness of the instructional generalization model in facilitating elementary students with learning disabilities to successfully generalize a newly learned strategy to novel conditions and with novel tasks. The results indicated that an instructional model could be developed which is effective, comprehensive and practical in the school setting.

Brigham (1992) investigated memory enhancing effects of elaboration and mnemonic encoding of an information presented with maps to more traditional,
non-mnemonic maps on recall of locations of events and information associated with those events by students with learning disabilities. Results revealed a significant increase in the recall of locations although not in the recall of event information.

Researchers highlight the importance of individualized methods for effective student learning of both learning disabled and non-disabled. The studies reviewed in this chapter on the effectiveness of the different methods adopted to minimise learning disabilities of students confirmed the superiority of these methods for learner autonomy by students of different educational levels. Studies also reveal that the different methods discussed are applicable to both the groups of learning disabled and non-disabled students. It is encouraging to note that these methods could be adopted in the regular classes.

The researcher, by reviewing the studies, became confident in her task of studying the effectiveness of self-instructional materials and modern instructional strategies in minimising the mental deficits of the students with mild learning disability.
References


