CHAPTER – II : REVIEW OF RELATED LITERATURE

2.1. Studies conducted in India
   2.1.1. Studies on Learning difficulties 23
   2.1.2. Studies on Teacher Competencies to handle Normal Children 28
   2.1.3. Studies on Teacher Competencies to handle Disabled Children 33
   2.1.4. Studies on Teacher Competencies to handle Learning difficulties in Children 35

2.2. Studies conducted Abroad
   2.2.1. Studies on Learning difficulties 43
   2.2.2. Studies on Teacher Competencies to handle Normal Children 46
   2.2.3. Studies on Teacher Competencies to handle Disabled Children 54
   2.2.4. Studies on Teacher Competencies to handle Learning difficulties in Children 71

2.3. An Overview of the literature Reviewed 79
CHAPTER - II

A collection of research works done by earlier researchers is technically called as 'literature'. Any scientific investigation starts with a review of the literature. Review of literature gives an idea of the research done previously, suggests basis for hypothesis and provides background for the method of study. It also helps to avoid unnecessary duplication. A careful review always aims at interpreting prior studies and indicating their usefulness for the study to be undertaken. Thus prior studies serve as the foundation for the present study. Better perspective for future research can be had with the help of reviewing the previous research works.

By keeping this in mind, the investigator has collected relevant Indian studies and foreign studies related to this field. The studies collected and reviewed are presented under the following headings.

2.1 Studies conducted in India
   2.1.1. Studies on Learning difficulties
   2.1.2. Studies on Teacher Competencies to handle Normal Children
   2.1.3. Studies on Teacher Competencies to handle Disabled Children
   2.1.4. Studies on Teacher Competencies to handle Learning difficulties in Children

2.2 Studies conducted Abroad
   2.2.1. Studies on Learning difficulties
   2.2.2. Studies on Teacher Competencies to handle Normal Children
   2.2.3. Studies on Teacher Competencies to handle Disabled Children
   2.2.4. Studies on Teacher Competencies to handle Learning difficulties in Children

REVIEW OF RELATED LITERATURE
2.1 Studies conducted in India

2.1.1. Studies on Learning difficulties

Studies on the learning difficulties, causes, characteristics, factors related to learning difficulties, and diagnosis of learning difficulties were reviewed and presented under this heading.

Anna Elizebeth Kuruvilla (1999) investigated creativity among the learning disabled children. The objectives of the study were 1) to assess the level of creativity of the learning disabled children, 2) to compare the creativity scores of the learning disabled boys and girls of std IV and V studying in government, government aided and corporation schools, 3) to establish relationship between creativity scores of learning disabled and economic status of the family and, 4) to determine if creativity scores of learning disabled are influenced by literacy of their parents.

The result shows that: 1) learning disabled children are creative, 2) differential analysis of the creativity scores of the learning disabled boys and girls show that boys are more creative than girls, 3) differential analysis made between the samples of STD IV & V revealed that V std children are more original than their juniors, 4) learning disabled children of government-aided schools were found to be better than those in government schools in flexibility and originality, 5) corporation schools are better than government-aided schools in fluency and flexibility; Whereas, in originality government aided schools were better, 6) all aspects of creativity of corporation school performance were better than government schools, 7) correlation analysis shows that creativity scores of the learning disabled are not influenced by the literacy status of parents and, 8) economic status of the family and creativity scores of learning disabled were found to be unrelated.

Barr (1974) made a study of auditory perceptual disorders in children with reference to language learning. The major objectives of the study were i) to study the auditory perceptual disorders in children with reference to language learning and ii) to focus on the listening experience of children which provided the foundation for language acquisition. The study revealed that i) statistically significant differences existed between the children with learning problems and normal control group on the standardised tests and ii) syntactical complexity rather than auditory memory was the critical factor in correct sentence repetition.
Bindu Prasad (1998) discussed the objectives and methodology for identification and assessment of children with learning disabilities. They reviewed the current clinical practices in India and emphasized that the diagnosis of learning disabilities should be made on the basis of partial information. Therefore, the need for comprehensive assessment by an inter-disciplinary team is more warranted.

Desai (1985) conducted a study on learning disabilities of primary school children in Gujarat. The findings were: 1) the most potential cause of learning disability was poverty, 2) the second cause of the malady was the apathy of teachers to their duties in school, 3) the third cause of learning disability was the abolition of examinations from standard I and II in the schools of Gujarat and, 4) low intelligence was also one cause of the malady.

Geetha (2000) attempted to find out the ‘impact of adapted techniques on achievement of dyslexic children’. The objective of the study was to identify children with reading disability, ii) to determine the areas in which they need corrective instruction iii) to develop remedial package and implement on the selected children iv) to evaluate the progress of the children with dyslexia v) to find out the relationship between the achievement of the students and adapted techniques followed.

The result reveals that there is increase in scores of post-test when compared with pre-test scores. For comparative study to find out the relationship between achievement of student and adapted techniques, ‘t’-test was administered.

Kusuma Harinath (2001) studied certain factors related to learning disabilities in English among school students. The objectives of the study were to develop Diagnostic tests to identify reading, writing and spelling difficulties in English; to find out intelligence of students with reading, writing and spelling difficulties; to study the personality characteristics of students with learning difficulties and; to study the awareness of teachers and parents about learning difficulties. The study reveals that 1) boys experienced more reading disabilities than girls, 2) age and class had no effect, 3) community influenced on their spelling difficulties, 4) parents educational qualifications influenced learning difficulties, 5) location of school influenced on the learning difficulties, 6) medium of instruction also influenced learning difficulties particularly spelling difficulties, 7) mass media has no influence, 8) parents income influenced learning difficulties but not writing difficulties, etc. Thus this study
delineates various factors related to learning difficulties in English among school students.

Mehta, Mohan, and Pande (1993) attempted to study the learning problems in rural primary school children. Their study shows that the common learning problems in the rural primary school children were poor memory (24.52%), poor comprehension (20.19%), poor concentration (18.5%), specific learning disabilities (6.9%), anxiety and stress (11%) and conduct problems (6.9%). They also point out that an orientation programme to create awareness of mental health aspects should be imparted to teachers, which in turn would help them to understand the student better.

Mohapatra (1991) studied the problem of reading, memory and attention processes of normal and reading disabled children. The sample comprised 40 subjects, 20 each form Grade II and Grade IV. Among them, 10 were normal and 10 were reading-disabled. The tools used included decoding test, comprehension test, letter cancellation test, visual closure test, visual memory test, auditory closure test and auditory memory test. The study reveals that the normal and the reading-disabled children did not differ with respect to their intelligence. In the case of decoding score, normal subjects of both grades performed better than the reading disabled subjects. In the case of oral reading errors, the normal children made significantly less errors than the reading disabled children. There was a significant difference in comprehension as a function of reading ability only and not grade. There was a significant difference in the Digit Span Score as a function of reading ability only and not for grades. This indicated that the normal children of both grades had better performance in digit recall than the reading disabled of both grades. The differences in the errors in letter cancellation as a function of grade was not significant. There was no significant difference in the letter cancellation time as an effect of grade as well as an effect of reading ability.

A comparative study with normally achieving students by Parmer et al. (1994) indicates that both students with mental retardation and those with learning disabilities lag considerably behind their average achieving peers.

Prasad's (1982) study with primary school children showed that poor expressive language development and poor visual perceptual development are primary factors leading to learning difficulties.
Ramaa (1984) conducted a study on diagnosis and remediation of dyslexia. In identification phase, dyslexics were identified from among a group of 550 children who were studying in grades III and IV & having Kannada as their first language at school through an exclusionary approach by using a set of criteria. Out of those 550 children only 14 could be identified as dyslexics. In diagnostic phase, this phase involved comparison of the neuropsychological process of dyslexics, non-dyslexic poor readers and normal readers, comparison of the errors committed by all the three groups while reading Kannada, analysis of the developmental history of the dyslexics was examined. The major findings were: 1) dyslexics were differentiated from the other two groups by visual verbal association ability, 2) dyslexics may or may not have deficiency in one or more visual and/or auditory processing skills, 3) majority of normal readers were deficient in visual processing skills in comparison with the other two groups, 4) like dyslexics, even non-dyslexic poor readers were relatively more deficient than normal readers in auditory processing skills, 5) there was no qualitative difference in the reading errors committed by the three groups of readers, 6) all the three types of readers got confused usually between letters with auditory or visual or auditory – visual similarities, 7) in most of the cases the substitute for the correct response while recognizing a letter as a word was same in all the groups of children, 8) 'Visuo-spatial' difficulties observed among dyslexics while reading Kannada, 9) though, in individual cases there were behavioural symptoms like delay in speech and/or motor development, cross laterality, hyperanxiety and impulsivity, there were no such symptoms common to most of the dyslexics, 10) the etiology of dyslexia could not be traced in all the cases, 11) the remedial programme was found to be effective in improving the accuracy of letter and word recognition to a considerable extent among all types of dyslexics, 12) the remedial programme was less effective in improving the speed of letter and word recognition and, 13) in almost all the dyslexics, the level of reading comprehension improved after the remediation.

Ramaa (1992) gives a list of the commonly observed problems among learning disabled children. They are: i) abnormal activity level such as hyperactive and hypoactive, ii) attention problems, iii) motor problems, iv) visual perceptual problems, v) auditory perceptual problems, vi) language problems, vii) faulty work habits, viii) social-emotional behaviour problems, ix) orientation problems and, x) academic disabilities.
She also lists the different types of learning disabled children such as:

- Oral – language disabilities: Dysphasia and Aphasia,
- Reading disabilities – Dyslexia and Alexia,
- Writing disabilities – Dysgraphia, Agraphia, Revisualization problems, formulation and syntax disorders, spelling problems and
- Arithmetic disabilities.

Reddy (1999) estimates that at present, there are about 10 to 15% of the student population suffering from learning difficulties in every classroom at primary stage.

Reddy, Ramar and Kusuma (2000) have published a book on 'Learning Disabilities' which is useful for a practitioner to overcome learning disabilities in children. In their book, they have clearly delineated the concept of learning disabled, how to identify and assess learning disabled, various intervention strategies to overcome learning disabilities and developing social competence among learning disabled students. They have given prime tactics such as: physical guidance, shaping, modelling, match-to-sample, telling, cueing, prompting, time delay, programming procedures and refinement tactics to overcome learning disabilities in children.

Reddy's (2000) paper on 'Role of Educational Technology in Learning disability' in which he has highlighted the need for assistive technology to the learning disabled. The processing, spell checking, proof reading programmes, brainstorming, speech recognition system, speech synthesis, screen reading, word prediction, personal frequency modulated listening systems and talking calculators were of much use to circumvent the learning disabilities in children.

Srivastava, Sushila and Afiah (1992) studied 'learning disabilities among elementary school children: Influence of sex, age and religion'. The study focussed on the identification of the learning disabled and assessment of their ability in reading, writing, spelling, language and arithmetic. The results revealed that age had a significant influence on disability in reading, language, writing and spelling. There was no significant difference between boys and girls in their disabilities in reading, arithmetic language and spelling but sex had a definite bearing on the writing
disability of the learning disabled. The Hindus, Muslims and Christians did not differ significantly on five types of learning disabilities.

Usha Ramakrishnan (1998) in her paper on multiple intelligence points out that people with learning disabilities are intelligent and yet have a difficulty in learning. Looking at intelligence differently may be the answer to understand how different people perceive, process, store and retrieve information. Howard Gardner's theory of 'Multiple Intelligences' views intelligence from a different perspective and has major contributions to understand people with learning disabilities.

To sum up, Desai (1985) conducted a study on learning difficulties of primary school children and found the various causes for it. Various factors related to learning difficulties were studied by Kusuma Harinath (2001) and Srivastava et al. (1992). Bindu Prasad (1998) and Ramaa (1984) conducted a study on diagnosis. Ramaa (1992), Usha Ramakrishnan (1998), Mehta et al. (1993), Prasad (1982), Barr (1974), Mohapatra (1991) studied the problems encountered by the children with learning difficulties. These are some of the studies related to learning difficulties in India. Learning difficulties is a new challenging area of special education and it is gaining momentum only in the recent years. So in developing countries like India, studies on learning difficulties are only limited in number.

2.1.2. Studies on Teacher Competencies to handle Normal Children

As a teacher, one should make teaching – learning process an interesting and motivated one. To conduct this process, a teacher has to possess certain knowledge, skills and performance, which are known as competencies. The studies on teacher competencies to handle normal children were reviewed and presented under this heading.

Adaval (1952) used a general knowledge test, an intelligence test and an aptitude test for teaching too found out the qualities of teachers under training. The study revealed high correlation between intelligence and teaching aptitude.

Agarval (1969) studied competence of teachers of primary schools to identify the causes of incompetence of teachers and suggested means to improve competence. A study was conducted on 770 teachers of Madhyapradesh. A teaching competence scale was developed. More than 53 percent teachers were not intelligent enough to be teachers and intelligence was significantly and positively
related to primary teachers. 52.6% did not like the teaching profession and their attitude was significantly related to the competencies of activities. About 70 percent did not possess adequate knowledge of the subject to be able to teach competently.

Teaching demands a range of skills and roles. The combination of technical, organisational and interpersonal roles means that the teachers have to be exceptional people. (Aludiapillai 1993)

Arora (1979) studied the differences between effective and ineffective teachers. The study indicated that the age and the tenure of service were non-differentiating characteristics. A greater number of ineffective teachers passed examinations while in service. For job motivation, the stage at which the decision to join the profession was taken, the considerations which influenced the choice of profession and the decision to join the profession were the differentiating characteristics. The teachers did not differ in terms of the length of teaching experience, satisfaction with the allotment of teaching subjects, textbooks and the mode of transport used for travelling to school. On personal and family circumstances, specifically marital status, financial conditions and leisure time activity, there was no difference. The groups of effective and ineffective teachers differed on the attitude to teaching, teacher – pupil relationship, discipline and punishment, teaching aids, homework and curriculum.

Bailkeri (1983) studied the effect of self-instructional remedial microteaching course on the instructional competence of in-service secondary school mathematics teachers. The objectives of the study were i) to prepare a mathematics instructional competence scale, ii) to diagnose the weak instructional skills of in-service mathematics teachers, iii) to prepare remedial self – instructional micro teaching course (RSIMC) materials to strengthen the weak skills, iv) to provide in-service training to the teachers through RSIMC, v) to evaluate the effectiveness of RSIMC in improving mathematics instructional competence, and vi) to study the reactions of participant teachers to the RSIMC. Fourteen teachers who were found to be weak in the skills of asking probing questions and of concreting abstract ideas with examples participated in the experiment. The Dharwad Mathematics Instructional Competence Scale (DMICS) 5-point scale was used. A rating scale was also prepared to collect reactions of participant teachers to the RSIMC.
The findings of the study were: 1) The RSIMC was effective in improving mathematics general instructional competence of in-service teachers of secondary schools in terms of the six instructional skills taken together and each skill independently, excepting the skill of using black board. 2) In-Service teachers sustained mathematics general instructional competence in terms of the six skills taken together and each skill independently (excepting skill of using black board) strengthened by RSIMC even two months after training. 3) Participant teachers held a favourable attitude towards the RSIMC.

Bhasin (1985), Baksh (1996) and Emmanuel (1996) remark that the teaching-learning transactions will be impeded unless teachers understand the uniqueness of individual students and the general characteristics of children as learners (Mitchell 1993).

Choudhari (1985) conducted a factorial study of the teaching competencies of teachers teaching English at the secondary school level. The data were collected with respect to 178 teachers from Pune and Indore district. The major findings of the study were: 1) the pedagogical domain of teaching competency in English consisted of 12 competencies which were independent of each other, 2) the competency ‘structuring questions’ accounted for 32 percent variance and correlated significantly with both the product variables, 3) all the competencies correlated positively with the product variables, 4) the contextual variable of location of school had an effect on half the number of competencies, 5) the demographic variables of teacher, sex and educational qualifications had been found to have an impact on almost half the number of the competencies and, 6) teachers’ intelligence and attitude were found to be associated with some of the competencies.

Debnath (1971) in his study on ‘Some important determinants of teaching efficiency’ found that age, experience, academic achievement and training are significantly related to teaching efficiency. The coefficient of correlation between teaching efficiency and age, experience, academic achievement and training were +.21, +.24, +.24, +.19 and +.31 respectively.

Jangira (1990) put forth some reasons for teachers not being able to meet the pedagogy of individual needs in the classroom are large class size, multi grade teaching, heavy curriculum load, poor physical facilities and constraints of the system.
Jeevanantham (2002) studied the competencies of teachers. Objective of the study was to find out the significant differences, if any, in the competencies (planning instruction, preparation of instructional materials, defining learning objectives and providing learning activities) possessed by the secondary grade teachers and B.T. Assistants. Four point rating scale was used to observe classroom instruction and for perusing the teachers records. The constructed tool consisted of a) Planning instruction competency, b) preparation of instructional materials, c) defining the learning objectives and d) providing learning activities. The study result shows that the competencies of secondary grade teachers and B.T. Assistants are very low in a) planning instructions, b) defining the learning objectives, c) providing learning activities and d) in preparing instructional materials.

Mariappan (1997) listed four competencies in his paper on 'Developing teacher competencies in environmental education'. They are: teaching competencies, cognitive competencies or cognitive abilities, social competencies and value based competencies.

Mohair and Nandapurkar (1993) in their article critically analysed the existing educational system particularly at primary level. The major problems related to educational system identified were qualification of teacher, training, lack of teaching learning aptitude, apathy towards job and lack of facilities. Finally, based on the analytical views, implications are drawn to restructure the existing rural primary education and to minimize the high percentage of school dropouts.

Narendra K. Sharma (1993) raised a central question in his paper 'Learning in children: The role of the teacher'. This paper helps to understand the problems of learning in children. Limitations of the behaviouristic and motivational theories are pointed out and it is suggested that cognitive theories can more appropriately answer the central question. Problems of learning and the role of teacher are explained in terms of one particular cognitive concept, namely, mental models. It is concluded that teachers should make an effort in the direction of improving overall performance by helping children develop appropriate mental models.
Palaniyandi (1997) gives various competencies to be developed among the pre-service teacher trainee in the paper 'development of teacher competencies among pre-service teacher trainees in environmental education'. They are: 1) the teacher develops a proper understanding of the psychological and sociological principles, 2) the trainee equips himself for promoting all round development of children, 3) the teacher generates the capacities for greater motivation, 4) the teacher manages learning resources, 5) organizes experiences to attain MLL, 6) caters to the needs of the children with special needs, 7) solves the social and emotional problems of children, 8) organizes supplementary educational activities for the needy children, 9) communicates effectively, 10) undertakes action researches to solve problems, 11) establishes rapport with the community and uses its resources for educational ends, 12) cultivates effective inter-school relationship and 13) manages the school affairs effectively.

District Primary Education Programme (DPEP), Tamilnadu (Paramasivam 1997) identified the following teacher competencies after conducting workshop at Vadalur and Krishnagiri. They are:

1. Planning the lesson
2. Managing instruction
3. Catering to the needs of slow / gifted children
4. Summative evaluation
5. Guidance and counseling
6. Promoting individual talents
7. Innovating methods
8. Institutional management
9. Establishing inter – school rapport
10. Involving community and
11. Developing non – scholastic skills.

Sub competencies have also been identified for these competencies.
Singh (1986), Shamsuddin (1991) and Jayakumar (1997) proclaimed that teacher education has been widened to include not only some professional skills, but also professional attitudes and values.

World Bank (1995) and Narayanan (1997) remarked that teacher's knowledge is strongly and consistently related to student performance. Teachers with a wide repertoire of teaching skills, are more effective than those with limited repertoire. The most effective strategy is ensuring that teachers have adequate subject knowledge and use instructional materials effectively (Singhal 1987, Rao 1996, and Sarojini Devi 1997).

Yadav (1983) studied the effect of training on teaching competence. The main objective of the study was to compare the teaching competence of student teachers with and without training for CQB and to compare pupils achievement in science. The pre test post test control group design was employed in two phases, over 40 student teachers and 800 pupils of class IX. The tools used were Prayag Maheta’s Group Intelligence Test and Achievement Test. The study indicated that the student teachers with CQB training resulted in improved question delivery behaviours and question distribution behaviours of student teachers. The training resulted in improvement in pupil response management behaviours and teaching competence.


2.1.3. Studies on Teacher Competencies to handle Disabled Children

Each and every child is unique and has different abilities and disabilities. Education is one of the fundamental rights that has to be provided for all. So
exceptional children also have the right to get education. For this purpose, a teacher has to be prepared to cater to the needs of these children. To perform this job he/she needs certain abilities or competencies in teaching activities. Researches conducted on competencies required for the teachers to handle disabled children are presented here under.

Cowasji (1985) conducted a study on the effectiveness of orientation programmes for teachers working in the integrated education for the disabled children in Rajasthan. The objectives of the study were i) to find out the present position of available resources, system of working and implementation of institutional plans in the schools selected for orientation by SIERT, Udaipur, ii) to assess the effectiveness of the teachers after their orientation, and iii) to make suggestions for improvement in the system of working and in the orientation programme and ways for providing more resources.

The study covered 5 schools in Rajasthan. 5 headmasters and 17 teachers of these schools were selected. Five questionnaires were used to evaluate the different kinds of work done and to find out the utility of the orientation programme. Some findings were: 1) there was improvement in pronunciation and spelling after the orientation, 2) the teachers felt that the orientation helped in raising their standard and it was useful, 3) because of orientation special activities like sewing and toy-making were introduced for the first time in schools, reveals the effectiveness of the orientation programme for teachers working in the integrated education for the disabled children in Rajasthan.

Mukhopadhyay and Sharma (1990) conducted a study on identifying teaching competencies specifically for integrated education of the disabled children, reveals that 1) the teachers had a positive attitude towards equal educational opportunity for disabled children in integrated classrooms, 2) the male and female teachers did not differ in their perception of skills required for enhancing integration, 3) in terms of pattern of ranking of competencies for integration there was unanimity in the perceptions of ranking of integrated schools; special schools did differ in their perceptions of pattern of ranking but however, it was found that more importance was given to competence such as setting of a social goal, followed by planning teaching activities, and 4) Competence for evaluation was given the third rank, and the least importance was given to identification and placement.
Reddy (2000) conducted a study on 'role performance of special education teachers'. In his study role performance of teachers dealing visually impaired, hearing impaired, mentally retarded and orthopaedically handicapped was studied. He also investigated the problems faced by these teachers in organization, teaching and providing guidance & counseling. Role performance scale and problem checklist were used in this study for data collection. The result of the study showed that the performance of teachers in guidance & counseling is low when compared to organisation and teaching roles.

Selvakani (2000) conducted a study on creating awareness on integrated education of the disabled children to the regular teachers. The objectives of the study were 1) to find out the previous knowledge of the regular school teacher, about disabled children, 2) to prepare instructional materials on various concepts related to the education of disabled children, 3) to organize an awareness programme for regular school teacher, 4) to develop knowledge about the role of teachers to meet the special needs of the disabled children and 5) to evaluate the imparted knowledge gained by regular school teacher. The result reveals that the knowledge about the role of teachers to meet the special needs of the disabled children is improved by organising awareness programme. And the awareness programme was found to be effective.

To sum up, Mukhopadhyay (1990) identified teaching competencies required for the teachers working in integrated education. Selvakani (2000) and Cowasji (1985) conducted studies to create awareness about integrated education of the disabled children among the regular school teachers. Reddy conducted (2000) a study on role performance of special education teachers. These are some of the studies quoted under this heading.

2.1.4. Studies on Teacher Competencies to Handle Learning difficulties in Children

Once the teacher knows he is able to make difference in teaching – learning process, he is ready to develop needed skills and abilities to handle children with learning difficulties. The studies dealt under this heading give, a clear picture about the competencies required to handle children with learning difficulties. Some research studies on learning attitudes and performance that he/she has to posses while handling children with learning difficulties are given here.

35
Bhattacharya (1986) investigated the learning disabilities developed by secondary school students in algebra. The major aims of the study were: 1) to conduct a survey of the learning disabilities developed by the beginners in secondary schools under the West Bengal Board of Secondary Education in linear equations, 2) to conduct a scientific experiment on the effectiveness of two mathematical methods for prevention of learning disabilities usually developed by the beginners in linear equation sums in one unknown in algebra, and 3) to provide from the results of the experiments a satisfactory mathematical method for beginners for solution of linear equations. The findings are as follows:

1. Students develop more learning disabilities in the understanding of linear equation sums to one unknown than the knowledge of solving sums.
2. Students develop more learning disabilities in the application of linear equation sums in one unknown than in the knowledge of solving such sums.
3. The simplified method is more effective than the method of transposition for the development of knowledge of students in solving linear equation sums in one unknown.
4. The simplified method is more effective than the method of transposition for the development of applicational ability of students in linear equation sums in one unknown.

Debdulal Dutta Roy (1993) presented a paper on computer simulation approach to develop teaching strategies for learning disabled children. This paper attempts to understand teaching objectives and teaching strategies for learning disabled children by developing analogy between computer and disabled child. Both are conceived as input-throughput-output system and the events in this world are fuzzy to both of them. It is assumed that both can learn environmental function through logical programmed instruction. An attempt is made on how to develop cognitive processing function of learning disabled children with some programmes based on BASIC language.

Dharmaraj (2000) reports in his study on 'Awareness of primary school teachers towards learning disabilities in mathematics at primary level' that educational qualifications of the teachers have influenced the awareness of primary school teachers. Further, the post-graduate teachers possess better awareness than
the secondary grade and graduate teachers on the aspects of learning disabilities in mathematics.

Donga (1993) says that learning disabilities are due to unsatisfactory emphasis on developing thinking skills. During classroom teaching, learners should be provided opportunities to develop various types of thinking skills like thematic thinking, exploratory thinking, productive thinking etc. Lack of these thinking skills affects badly to the academic achievement of the learner and causes for learning disabilities.

There are various approaches to develop such skills. One of them is self-instructional training, self-instruction is thought to promote the maintenance of learned skills and strategies by providing a general frame work for any cognitive task, by providing feedback and by including self-control over the entire process. This training includes five motivational/meta cognitive components. They are:

1. Planning
2. General, or specific strategy of instruction
3. Feedback mechanisms
4. Error correction and
5. Self-reinforcement

If a teacher emphasises on these meta cognitive components during his teaching, it will be helpful to adopt self-instructional approach by the learner. This approach will be helpful in developing different cognitive thinking skills and to overcome learning disabilities.

Dutta (1986) studied the learning disabilities in the reasoning power of the students in geometry. The main objectives of the study were i) to diagnose the major patterns of disabilities in a specific area of geometry with the help of tools specially developed for the purpose and ii) to try out experimentally teaching methods which would prevent development of learning disabilities in the area under study. Some of the findings were: 1) 33 major patterns of disabilities were identified, 2) the experimental groups taught by audio-visual materials and the techniques achieved significantly more than the controlled groups taught by conventional methods.

Jayanti Narayanan (1994) has developed Grade level assessment tool for children with learning problems in schools. Teachers can use or adopt these tests
for testing children who fail consistently in one or more subjects. The Grade level assessment tool (GLAT) helps primary school teacher to test his/her student while systematically making observation of the processing pattern in a child.

Jasobanta Roy (1993) stresses on workshop in evolving appropriate educational strategies for Indian children with learning disability. Kavitha Milner (1999) explains eight steps to recognize a problem and get help to the child who has a learning disability. The eight steps are: 1) rhyme with reason, 2) watch for warning signals, 3) visit the doctor, 4) talk to the teacher, 5) study the school environment, 6) teach at home, 7) use technology and, 8) don’t give up. Kavitha Milner also quoted that many people had overcome learning disability to become notable successes. They include Leonardo da Vinci, Thomas Alva Edison and even Albert Einstein.

Lakshmi Radhakrishnan (1996) dealt about ‘the diagnosis and remediation of arithmetic disabilities’. She points out some of the teaching methods to the students with deep problem. They are:

1. The teacher works out the sum step by step the student listens.
2. The teacher works out the same sum step by step on board. As the teacher says student repeats.
3. The student does along the same sum (speaking step by step)
4. Similar problems are given to the students.
5. Student follows with steps 3 and 4.

She also stresses drill method, multi sensory teaching method, visualizing and verbalising method.

Lakshmi (2000) conducted a study on teaching dyscalculic children using play - way method. The objective of the study was: i) to identify children with dyscalculia, ii) to prepare kit containing various games, iii) using the prepared kit effectively for teaching arithmetic, iv) to assess the performance of the children, v) to study the effect of games in teaching arithmetic to dyscalculia children. The result shows that play way method was found to be more effective in teaching arithmetic to dyscalculia children.

Mishra’s (1991) study centres upon the problem of development of teaching steps for handling arithmetic disabled children. With training and following the
teaching steps, the disabled subjects, could perform in a better way. With repetition, the subjects' performance improved. Thus, the defect did not lie with the teaching procedures as the subjects' performance was increased, though the improved performance remained for a shorter period. With repetitive training and more assessment, the subjects could improve and retain in the memory for a longer period.

Mohite, Prerana (1989) attempted to develop and implement a classroom instructional programme for children with learning difficulties. The sample comprised 60 children belonging to all the three municipal corporation schools. Among them, 18 had dropped out. Finally, 42 children were considered. The tools used included Teachers' Rating Scale (TRS), Graded Word Test of Spelling (GWT) and Criterion-referenced Test (CRT) of reading. Major findings of the study were: 1) many children of the experimental group improved, i.e. progressed to higher level paragraph in post-test as compared to pre-test in oral reading. 2) on silent reading, it was found that most of the children irrespective of being in the experimental or the control group progressed to higher-level paragraphs. 3) on listening comprehension, it was found that most of the children in the experimental group improved, except in standard IV where children regressed to lower level paragraph. 4) in Graded Word Test, it was found that the pre-test score differences between experimental and control groups for all the standards were not significant, indicating that before the programme both he groups performed at the same level.

Mohankumar and Rajaguru (2002) attempted to find the effectiveness of multimedia instructional strategies on the achievement of learning disabled children in learning maths concept. The objectives of the study were: i) to identify learning disabled children and ii) to find the effectiveness of multimedia instructions over the conventional method of teaching on the achievement of learning disabled children in learning maths concepts. Further, this study attempts to compare the academic achievement of learning disabled children in terms of background variables and the method of teaching in the classroom. The data collected from the different treatments were subjected to statistical analysis. The investigators found that the multimedia instruction facilitated the children with learning disabilities in learning maths concepts rather than their counterparts in conventional teaching group. This type of experimental study will be extremely useful in the field of education to deal children with learning disabilities.
Nagomi Ruth (2000) studied awareness on learning disabilities among regular school teachers. Objectives of the study were i) to access the knowledge among regular school teachers on learning disabilities, ii) to organise awareness programmes, iii) to give knowledge about identification and remediation for learning disabled and, iv) to evaluate the impact or effect of knowledge gained by regular school teachers. The result of the study shows that the awareness programme was found to be effective.

Rajeswari (1993) in her paper 'Strategies for overcoming learning problems' stressed the teacher's role as a creative mediator. She also said that advances in educational technology notwithstanding, no machine can replace the teacher. The teacher is the guide, philosopher, friend and supreme, as the leader of classroom.

Fruitful contingent classroom interaction are bound to flow from the motivation provided by a bright and dynamic teacher who knows each member of the class. The self image of the child is very important and the teacher should boost this. When this is lost the child develops a 'don't care attitude'. The teacher can easily boost the self image of the pupils who do not perform well in the class by:

- electing them as class monitors
- entrusting them in academic work both important and intellectual
- building up their self-confidence by treating them on par with other children
- ask questions
- linking lesson with child's interest.

She also pinpoints the use of audio visual aids in teaching, and joyful approaches in learning.

Ramaa (1992) in her book 'Package on learning disabilities' points out that learning style of the student and content needs of the pupil are important factors in evolving an instructional programme for the students. Multi-sensory teaching is also stressed in teaching – learning process while handling children with learning disabilities.

She also deals about different aspect of learning disabilities in her 'Handbook on learning disabilities'. The major focus is on enabling the teacher educator to develop proper insight with respect to the nature of learning disability. The book provides procedures to identify and diagnose such disabilities and general principle
and procedures in providing remedial help to the learning disabled children in regular classroom. The book has been prepared on the basis of practical and research experiences acquired by her in the area of learning disabilities.

Rath (1991) conducted a study on ‘Individualised instruction training approach for teaching children with learning difficulties in reading and comprehension skills’. It was found that there was improvement in scores in the post-training session as compared to the pre-testing scores.

Rozario and Kapur (1993) conducted a study on ‘Effectiveness of intervention strategies with students who have problems in learning’. The objectives of the study were i) to identify the nature of the learning problems of these students and ii) to help them through suitable remedial education. 25 students with learning problems were assessed for language and arithmetic skills. They were allotted randomly to 5 groups. Each group was given around 25 sessions of remedial education. At the end of 25 sessions, a post-treatment assessment was done. The results indicate that there was significant improvement in language and arithmetic skills. There was no significant difference between the students who took tuition and those who did not take tuition.

Sarojini (2000) conducted a study on the awareness of primary school teachers towards learning disabilities in English at primary stage. Her study reveals that there is a need to generate awareness among primary school teachers towards learning disabilities in English. The personal variables such as - years of experience, type of school, locality of school also influence awareness of primary school teachers towards learning disabilities.

Sivakami (2000) investigated ‘The effectiveness of certain instructional strategies to overcome learning disabilities in English at primary stage’. The major focus was on the remedial instructional strategies to be adopted for the children with reading, writing and spelling difficulties. The post test achievement scores were higher than the pre-test achievement scores. This throws light on the effectiveness of the remedial instructional strategies used to overcome learning disabilities in English.

Geetha (1997) conducted a study on ‘Efficacy of remedial package in augmenting primary school teachers’ skills to help dyscalculic children. The
objectives of the study were a) to sensitise primary school teachers towards children with learning disabilities, b) to assess the academic performance of primary school children and identify dyscalculic children among the scholastically backward, c) to evolve and implement a remedial intervention programme for dyscalculic children and, d) to evaluate the efficacy of the remedial package developed. The results of the study state that 50% of percent of teachers perceived them as 'problem children', while 19 percent referred them as 'educationally backward' and 12 percent as 'slow learners', nearly 11 percent of the teachers presumed them to be children with low IQ. With no basic training inputs in this emerging field, only seven percent teachers branded them as children with learning disabilities. Sensitisation programme for primary school teachers and remedial intervention programme were given to the identified primary school children with dyscalculia and the said programme was found to be effective.

Velumani (1997) prepared remedial instruction for children with arithmetic disabilities. Objectives of the study were: i) to identify children with arithmetic disability at primary level I to V Std, ii) to assess the specific problems encountered by them, iii) to prepare instructional materials for remediation and, iv) to study the effect of remedial instruction on children with arithmetic disabilities. The result reveals that the remedial instructional materials were found to be effective. Number chart, matching cards, group of sticks, beads, stones, buttons for addition, drawing picture and number line for division, cards with square shaded half, full, quarter for fraction, digital clock for time real coins and currency for teaching money concept were used in the remedial instructional materials.

2.2. Studies done Abroad

Studies done abroad were collected from various sources. The collected studies were presented under different sub headings.

2.2.1. Studies on Learning difficulties

Studies on learning incidence, learning difficulties, identifying and helping children with learning difficulty and causes of learning difficulties were presented under this heading.

Affleck, Madge, Adams and Lowenbraun (1988) compared the academic achievement of students with learning disabilities in an integrated classroom model, with the achievement of students having learning disabilities in a resource room programme. No significant differences were found between the achievement scores (ie., in reading, maths, and language) of students in the respective programmes. They also note that the integrated classroom model was shown to be less costly than the resource room program but the two placements achieved similar results.

Baiden (1984) states that dyslexia is common with around 5% incidence regularly identified in the western countries. Border (1971) finds that there are three groups of dyslexics: 9% of dyslexics have visual problems which are called dyseidefic, 63% of dyslexics have auditory and linguistic problems which are called dysphonetic and the remaining is a mixed group.

Case, Lisa Pericola (1997) studied mathematical understandings to know how students with learning difficulties progress in a constructivist classroom. Six students and their teacher were the focus participants in the study. The teacher participant had two years of experience in project IMPACT, a research study which helped teachers to improve the mathematics achievement of all students through more constructivist teaching methods. The results suggested important relationships between participants’ mathematics learning and a) their role in the classroom community, b) the methods of instruction and, c) the influence of relationships outside of the classroom. Specific strengths discussed in the conclusions are students’ willingness to take risks and their level of involvement. Weaknesses are indicated in the area of instructional grouping, assessment techniques, and teacher support.
Catherine V. Morsink (1983) initially opines that the incidence and prevalence is to be about 2%. Similarly, Crisfield (1996) estimates that as much as 10% of the population may have mild developmental dyslexia and 4% have severe dyslexia. American Psychiatric Association (1994) estimated that approximately 3% of the school population should be regarded as specifically learning disabled.

Coronado V. Marco (1995) studied the anxiety of learning disabled school children with remedial instruction. The purpose of the study was to investigate the anxiety levels of elementary school learning disabled (LD) students provided with at least one semester of remedial instruction. The results indicate that compared to non-LD, the LD students displayed significantly higher levels of general anxiety, worry, over sensitivity, social concerns and concentration difficulties. Learning disabled females displayed significantly higher levels of general anxiety, worry and over sensitivity than LD male students. In addition, learning disabled 5th grade females showed significantly higher levels of anxiety than the learning difficulties of 3rd and 4th grade male and female students. Moreover, learning disabled and regular education lower grade students did lie significantly more than upper grade students.

Frost and Emery, (1996) Gibson and Levin (1975) report that at least 15% of American School Children have reading difficulties. Johnson et al (1956) estimate indicate that from less than 1½ % to more than 1% children may have difficulties in vocalisation. Mittler (1995) opines that it is difficult to obtain an accurate picture of number of people who were defined as having learning difficulties. The available survey on the prevalence of learning difficulties in the total population is predicted to be 2% (Lerner, 1993).

Holcomb, Helene, Beatty (1995) attempted to compare the achievement of low-achieving and learning disabled elementary school students. This study examined the academic progress in basic reading skills of students identified as learning disabled (LD) with and without ability / achievement discrepancies and low-achieving non-disabled (LA) students. The purpose was to examine the characteristics of LD and LA students, to investigate their achievement in reading during a school year, and to explore the factors that influenced their academic progress in light of the discrepancy assumption of the learning disabled definition. The result reveals that the learning disabled students exhibit distinct characteristics that distinguish them from other low achievers. The discrepancy component of the
learning disabilities construct suggests that the learning disabled have with discrepancy between ability and achievement in reading. Students would benefit more from special education instruction than other low achievers and that they would make more academic progress than learning disabled with no discrepancy (Learning Disabled – ND) students because of higher ability (IQ).

Peter Farrell (1997) states that there may be several reasons why pupils may have difficulty in learning the task or one step of it. For example:

- The pupil may be confused due to the task not being presented clearly – the materials may be in a muddle or the teacher may be distracting the student by using inappropriate language.

- The pupil may be finding the whole teaching session unrewarding resulting in his/her losing interest or appearing fed up.

- The step may be too difficult.

The following are some suggested solutions.

1. The teacher should observe carefully whether, i) the pupil is attending to the task, ii) the materials are set out correctly and there are no distractions; iii) the instructions are clear and, iv) the prompting is effective.

2. If the above step does not work, the teacher should go back to the previous step which has already been learned. If the pupil fails on this step as well, then perhaps the student has forgotten how to do it and it needs to be taught again, possibly to a more stricter criterion of success.

3. If the pupil succeeds on the previous step, the problem may lie in the present step being too difficult. The teacher could do further task analysis on this step and break it down into two or more simpler steps.

4. Perhaps the pupil no longer feels rewarded for working on the task. In this case, a different reward could be used or existing rewards could be strengthened. Alternatively the pupil could be given a break from working on the task.

Students who have a learning difficulty do not form a homogenous group. They have a wide variety of characteristics, ranging from academic difficulties to cognitive and social problems (Van Kraayenoord & Elkins, 1994).

2.2.2. Studies on Teacher Competencies to handle Normal Children

Studies on teacher competencies to handle normal children were reviewed and collected to know the important competencies, skills required to perform teaching activities effectively in the regular classroom. The studies are presented here under.

Ainscow and Muncey (1989) found that the most effective teachers.

- emphasise the importance of meaning,
- set tasks that are realistic and challenging,
- provide a variety of learning experiences,
- give pupils opportunities to choose,
- have high expectations,
- create a positive atmosphere,
- provide a consistent approach,
- recognise the efforts and achievements of their pupils,
- organise resources to facilitate learning,
- encourage pupils to work co-operatively and,
- monitor progress and provide regular feedback.

Borich (1992) notes that the following teaching behaviours are important for low-and high-socio economic students.

For low-socio economic students:

- be warm and encouraging, and between students know that help is available,
- elicit a response from a student each time a question is asked before moving to the next student or question,
- present material in small pieces, at a slow pace, and with an opportunity for practice,
- stress factual knowledge,
- monitor student progress,
- minimize interruptions by maintaining a smooth flow from one activity to another,
- immediately help a student who needs help and,
- supplement the standard curriculum with specialized material to meet the needs of individual students.

For High-socio economic students:

1. correct poor answers immediately when a student fails to perform,
2. ask questions that require associations, generalizations, and inferences,
3. supplement the curriculum with challenging material,
4. assign homework and extended assignments,
5. be flexible,
6. let students initiate teacher-student interactions,
7. encourage students to reason out a correct answers and,
8. actively engage students in verbal questions and answers.

The curriculum is designed to prepare students to function competently in a variety of educational settings with a heterogeneous population ranging from birth to adulthood, and in all roles related and essential for the performance of professional actions (Bower, 1965).

Brophy and Good (1986) and Alderman (1990) reported that a positive learning environment and student learning were enhanced when teachers believe that all students can learn and that teachers can make a difference.

Chow (1981), Sindelar, Smith, Harriman, Hale, and Wilson (1986) reported that achievement gains and academic engagement time were greater during teacher-directed behaviour than during independent work.

Christenson et al. (1989) state that the following factors contribute to a positive learning environment: a) the use of realistic expectations for student
learning, b) the development of instructional plans that consider student characteristics and needs, c) the use of reinforcement for student productivity, d) the use of active monitoring of student progress, and e) the belief that all students will experience academic success.

Crone and Hunter (1980) brought out the competencies expected from a non-formal instructor. They are:

- treating students with self-respect with the awareness that each one of them may be more experienced or skilled than the instructor in one or more areas,
- giving more praise and fewer rebukes (that may slightly hurt),
- using the past experience of the learners in their own instruction,
- helping learners to unlearn earlier acquired improper method of handling an instrument (e.g. Single handed typing),
- remaining watchful regarding the mistakes committed by the learners and providing remedial measures immediately,
- providing reinforcement than expected informal system,
- providing knowledge of test results as quickly as possible,
- providing opportunities for adequate practice of learners,
- using variety of methods in instructional programmes,
- making use of audio-visual aids adequately and judiciously,
- organising with the help of the learners various types of visits, cultural functions, games and sports observation of different national days and festivals etc,
- making the learners interested in community development programmes,
- knowing various people welfare programmes in operation in the area in which the non-formal education centre is situated,
- making the persons involved in various programmes of the centre and in suitable cases getting them take part in instructional programmes,
- eliciting answers from learners who think that they do not know,
- preparing instructional materials including assignments which are interesting worth while and double,
- clearly communicating instructional goals to learners and instructor awareness of their behaviours,
- spending more time in supervising and directing student work and
- knowing the dialect being spoken by the majority of the target population and becoming aware of various aspects of the culture of the community fed by the centre.

Ganeles (1974) believed that Competence based teacher education programmes for adult educators will provide better preparation than traditional programmes.

Greenwood (1991) used class wide peer tutoring with at risk elementary students to increase time on academic tasks over a 5-semester period. The peer tutoring group achieved academic gains that were superior to a control group of comparable students.

Greenwood, Arreaga - Mayer, and Carta (1994) found that the students in classrooms where teachers used research–based interactive teaching practices had higher academic engagement times and achievement scores than students in classrooms where teachers used other methods.

Hampton (1951) employed rating as the sole criterion of teacher effectiveness. For her study, she has chosen twelve items such as – co-operation and loyalty, knowledge of subject matter, courtesy and friendliness, interest in school activities, discipline, emotional poise, general culture, health and vitality, personal appearance, resourcefulness, response to criticism and speech.

Howey, Kenneth (1983) presented a paper on ‘teacher’s role/ responsibilities and teacher competence testing: future possibilities’. This paper examines how teacher competence was related to the role expectations set forth for teachers – specifically elementary teachers. Data descriptive of teachers today were reviewed. Factors which appear to deter highly compete persons from entering teaching were also identified. The paper projects even more challenges to a role often characterised by an unreasonable span of responsibility. How instruction was delivered in this country was contrasted with selected curricular and instructional trends in other highly industrialized countries. The comparison suggests that more specialized and delineated roles for elementary teachers should be explored in this
country and that competence be defined in more specific context and functions than at present.

Leeds (1956) found that those who get along well with pupils tend to be cooperative, friendly, objective, emotionally stable, to a lesser degree manifest sociability, social ascendancy and masculinity in emotions and interests. Those who do not have high rapport with pupils tend to be critical and intolerant, hostile and belligerent, hypersensitive, depressed and emotionally unstable, and to a lesser degree tend towards submissiveness, shyness, seclusiveness and femininity.

Moore, Kenneth, Hanley, and Patricia, (1982) identified elementary teacher’s needs. Elementary school teachers indicated six need areas: 1) developing effective learners and a mastery of basic skills, 2) guiding children to set up and achieve realistic goals, 3) locating materials and in service support for effective teaching, 4) maintaining discipline, 5) identifying and understanding readiness factors that affect learning and, 6) motivating children to learn.

Involvement in teaching – learning activities has the advantage of facilitating increased teacher competence and confidence as well as increasing the effectiveness of educational programming (Poplin, 1979).

Samuels (1986) reports that an academic focus with a humanistic orientation increases student achievement. The teacher was the key individual who influences the tone of a classroom. The teachers arrange physical variables (e.g. lighting, temperature, and seating) and academic variables (e.g. scheduling, method of lesson presentation, test dates and homework) and establish the effective nature (e.g. encouragement, competitiveness and co-operation) of the classroom.

Sorenson et al. (1963) developed an instrument designed to assess teacher role expectations. A preliminary form administered to 284 students was designed to measure 6 role dimensions namely – information giver, disciplinarian, advisor, counsellor, motivator and referrer. A factor analysis confirmed these 6 factors and provided a basis for a revised form which was administered to 94 students. The results also were factor analysed. On the basis of the 2 studies, a revised set of key was developed for 5 of the 6 scales. Advisor and information giver scales were combined to form a single scale. Reliability estimates for the scales range from 0.77 to 0.93. The scales have low to moderate inter – correlations.
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Stevens and Rosenshine (1981) report that successful teachers maintain a strong academic focus. Effective teachers instruct students to spend more time working directly on academic tasks in texts, workbooks, and instructional materials. They assign and hold students responsible for more homework and test students more frequently.

The Scottish Office, Education Department (1993) had listed teaching competencies in 'Guidelines for Teacher Training Courses'. They are:

**Competencies relating to subject and content of teaching**

The new teacher should be able to:

- demonstrate a knowledge of the subject or subjects forming the content of his or her teaching which meets and goes beyond the immediate demands of the school curriculum plan generally, and in particular prepare coherent teaching programmes which ensure continuity and progression, taking into account national, regional and school curriculum policies and plan lessons within these teaching programmes,

- select appropriate resources for learning, for example from radio and television broadcasts,

- present the content of what is taught in an appropriate fashion to pupils and,

- justify what is taught from knowledge and understanding of the learning process, curriculum issues, child development in general and the needs of his or her pupils in particular.

**Competencies relating to the classroom**

**Communication**

The teacher should be able to:

- present what he or she is teaching in clear language and a stimulating manner and,

- question pupils effectively, respond and support their discussion and questioning.
Methodology

The new teacher should be able to:

- employ a range of teaching strategies appropriate to the subject or topic and, on the basis of careful assessment, to the pupils in his or her classes,
- identify suitable occasions for teaching the class as a whole, in groups, in pairs or as individuals,
- create contexts in which pupils can learn,
- set expectations which make appropriate demands on pupils,
- identify and respond appropriately to pupils with special educational needs or with learning difficulties,
- take into account cultural differences among pupils,
- encourage pupils to take initiatives and become responsible for, their own learning,
- select and use in a considered way a wide variety of resources, including information technology and,
- evaluate and justify the methodology being used.

Class management

The new teacher should have knowledge of the principles which lie behind the keeping of good discipline and should be able to:

- deploy a range or approaches to create and maintain a purposeful, orderly and safe environment for learning,
- manage pupil behaviour by the use of appropriate reward and sanctions and be aware when it is necessary to seek advice,
- sustain the interest and motivation of the pupils and,
- evaluate and justify his or her own actions in managing pupils.

Assessment

The teacher should:

- have an understanding of the principle of assessment and the different kinds of assessment which may be used,
- be able to assess the quality of pupils learning against national standards defined for that particular group of pupils,
- be able to assess and record systematically the progress of individual pupils,
- be able to provide regular feedback to pupils on their progress and,
- be able to use assessment to evaluate and improve teaching.

Competencies relating to the school

The teacher should:

- have some knowledge of the system in which he or she is working and in particular of the organisation and management systems of schools, school policies and development plans and where they relate to his or her teaching,
- know how to discuss with parents a range of issues relevant to their children,
- be informed about school boards,
- know how to communicate with members of other professions concerned with the welfare of school pupils and with members of the community served by the school, as well as with colleagues within the school and its associated schools,
- be aware of sources of help and expertise within the school and how they can be used,
- be aware of cross-curricular aspects of school work and able to make an input into these and,
- have interests and skills which can contribute to activities with pupils outside the formal curriculum.

Competencies related to professionalism

The new teacher should:

- have a working knowledge of his or her pastoral, contractual, legal and administrative responsibilities and
- be able to make a preliminary evaluation of his or her own professional progress.
However, professionalism implies more than a mere series of competencies. It also implies a set of attitudes which have particular power in that they are communicated to those being taught:

- a commitment to the job and to those affected by the job,
- a commitment to self-monitoring and continuing professional development,
- a commitment to collaborate with others to promote pupil achievement,
- a commitment to promoting the moral and spiritual well-being of pupils,
- a commitment to the community within and beyond the school and promoting a responsible attitude towards the needs of the environment and,
- a commitment to views of fairness and equality of opportunity as expressed in multicultural and other non-discriminatory policies.


2.2.3. Studies on Teachers Competencies to handle Disabled Children

The studies related to teacher competencies to handle disabled children are reviewed and presented here.

Interactive Teaching Competencies from Effective Teaching research

Competencies for Beginning a Lesson
- gain students attention through an interesting comment or observation,
- review prior lesson for student understanding and knowledge, and reteach if necessary,
- link current lesson to previous lesson activities, strategies or content,
- identify target skill or content of current lesson,
- provide a rationale that relates the importance of learning the skill or content to meaningful contexts (i.e., relate it to events or situations in students’ daily lives) and,
- explain the task in terms of teacher action and learner expectations.

Competencies for Describing or Explaining
- relate lesson information framework to help students organize new knowledge,
- provide an organisational framework to help students organize new information,
- provide step-by-step explanations of the overt and covert processes involved in learning the information, concepts or strategies,
- describe situations in which the information or strategy is useful,
- encourage goal setting for learning the new information and,
- summarize the lesson skill, strategy, or content. Explain how to perform the skill or strategy or use the content. Discuss the contexts for using the skill, strategy, or content and note how it is beneficial and how it can be adopted.

Competencies for Demonstrating and Modelling
- provide step-by-step demonstration of covert and overt procedures involved in learning new information or applying strategies,
- use think-alouds to model covert processes involved in learning strategies or problem solving,
- provide examples and non-examples to show distinctive / non-distinctive features of a concept,
- maintain the lively pace while modelling, but allow enough time for students to understand the content or strategy,
- teach with enthusiasm,
- model task-specific learning strategies (ie., perform the task) and self-instructions (e.g. self-monitoring or problem solving) to help students achieve,
- prompt student involvement, and check understanding during modelling,
- correct student responses and help students expand responses and,
- note organization relationships and clues in the new material that elicit learning strategies.

**Competencies for Conducting Guided Practice**
- provide clear directions and expectations for guided practice tasks,
- model guided-practice behaviours,
- prompt student participation through questions and provide additional practice until students stop making errors,
- use perspective instructional prompts and cues to guide successful student learning,
- monitor student progress to ensure that students maintain a high success rate (ie., 70% to 90% accuracy),
- maintain a lively pace,
- provide error-correction procedures through prompting, model or cuing rather than telling the answer,
- summarize the lesson accomplishment of individuals and the group and,
- forecast the content of the following lessons.

**Competencies of Conducting Independent Practice**
- describe the assignment and the criteria (e.g. neatness, accuracy and promptness) used to evaluate it,
- explain the rationale of the assignment and its importance,
- check to ensure that students understand the assignment through questioning and reviewing homework and previous assignment,
- demonstrate strategies and procedures for completing independent practice activities,
- review tasks in assignment,
- maintain records and graphs of students’ performance,
- provide the error-correction activities during seat-work,
- provide results of evaluation to the students,
- praise or reinforce students for independent work effort and assignment completion,
- circulate among students to monitor progress and assist students,
- frequently scan the classroom to see if students are working,
- ensure that students experience high rates of success during seatwork,
- hold students accountable for independent work,
- have students complete missed assignments and correct errors, ensure that independent work relates to academic goals,
- provide peer tutoring and co-operative learning grouping arrangements for students matured enough to interact appropriately,
- provide a variety of independent practice activities. (e.g. in structural games, self correcting materials, computer – assisted instruction, tape recorder – assisted instruction, and quality homework practices) and,
- instruct students to generalize and apply knowledge across setting and situations.

**Competencies for Promoting Generalization**
- have students discuss rationales for using content or strategy,
- have students identify setting for using content or strategy,
- identify cues in setting that remind students to use content or strategy,
- enlist assistance of other teachers to encourage generalization of content or strategy,
- identify metacognitive processes needed to remember and apply content or strategy,
- set goals to use content or strategy in different contexts,
- teach content or strategy to mastery,
- relate content or strategy use to personal lives of students,
- use a variety of activities on teaching content or strategy (e.g., different teachers, peer instruction, and various practice activities),
- teach content or strategy that is likely to be reinforced or useful in the students natural environment,
- enlist help of parents to encourage the use of content or strategy at home,
- use of variety of formats (e.g., objects, pictures, media and computer assisted instruction) to teach content or strategy,
- encourage students to use content or strategy in their daily lives,
- point out to students that successes are related to their own efforts,
- encourage students to engage in self-management through meta cognitive strategies (i.e., use of mnemonics that key strategy use) and,
- teach students to set goals and monitor progress their goals.

Competencies for Managing Behaviour
- establish a positive, expectant, and orderly classroom environment,
- Use task-specific and descriptive praise,
- use a hierarchy of reinforces to adapt to the level of student maturity (e.g., food objects, tokens, points, praise, activity, or sense of, mastery),
- maintain a 3:1 ratio of teacher attention to positive classroom events versus negative classroom events,
- provides positive reinforcement for appropriate behaviour or effort, successful task completion, and the learning of new or difficult material,
- maintain a positive classroom environment through enthusiasm, encouragement and a positive disposition,
- ensure that students have the ability or skills to acquire the targeted content or perform the strategy or procedure being taught,
- gradually shift reinforcement from appropriate behaviour to learning accomplishments,
- provide student with verbal reminders to follow rules,
- establish rules that involve respect for others,
- correct student behaviour in a way that helps them understand the appropriate behaviour for the situation,
- clearly state what behaviours are expected and what behaviours are not tolerated,
- introduce and discuss rules, procedures and consequences for following rules and breaking rules,
- post rules, discuss rules and provide rationale for rules,
- instruct students to understand and follow rules through demonstrating, modelling, giving examples and non-examples, providing reinforcement to students for following rules, correcting students for not following rules, and applying consequences for students who break rules,
- use non-verbal signals when feasible to direct students in a manner that does not disrupt the class,
- deliver specific praise and,

**Competencies for Managing Instruction**

- establish classroom routines and procedures to promote the activities,
- provide explicit instruction in classroom routines,
- engage in frequent positive and supportive interactions,
- provide more teacher-led instruction than independent work,
- reinforce student accomplishments,
- frequently scan the classroom,
- arrange the classroom to facilitate smooth transitions and ease of student monitoring,
- communicate expectations, and provide structure for learning (e.g., instructional groupings, prescriptive seatwork, accessible materials and support for working),
- use metaphors, anecdotes and concrete examples to help students connect new content with their existing knowledge,
- hold students accountable for work, and keep records of progress,
- circulate throughout the classroom to check the accuracy of work and progress of students,
- engage students on talk about their own thinking and,
- ask students to interact with each other and collaborate on problem-solving tasks.

**Competencies for Asking Questions**

- use questions to individualize instruction,
- use question to increase lesson clarity,
- use questions to check for understanding,
- use rapidly paced questions in basic skill instruction in which shortly, factual answers can encourage learning,
- to maintain group attention, call on a student after, rather before, a question,
- promote higher-order thinking through questions that encourage application (i.e., questions with apply and use), analysis (i.e., questions with relate and distinguish), synthesis (i.e., question with formulate and create), and evaluation (i.e., question with justify and appraise),
- use questions that elicit correct answers about 75% of the time,
- respond to incorrect answers in sensitive and helpful manner,
- use questions that encourage students to respond with substantive answers (including incorrect, incomplete, and "I don't know" answers) about 25% of the time,
- attend to who is answering questions correctly during discussions,
- call on non-volunteers, and ask students to elaborate on other students answers and,
- wait or pause for about 3 sec after asking a question and calling on a student to enable the student to offer a substantive response (e.g. give a correct or incorrect answer, ask for clarification or say "I don't know").
**Competencies for Monitoring Progress**
- monitor progress continuously to maintain an instruction match between the instructional task and the student’s ability, skill, and existing knowledge,
- monitor to check understanding of task demands by asking the student perform a sample task,
- monitor to ensure high rates of success system to improve student learning and,
- check homework, grade and comment on homework quickly.

**Competencies for Giving Feedback**
- give frequent positive feedback for student successes,
- provide informative feedback (e.g., note error patterns and highlight positive features) to students in making written or verbal corrections,
- involve students in setting instructional goals, and discuss performance in terms of goals,
- view errors as teaching opportunity and reteach (e.g., provide modelling or guided practice) on the basis of student performance,
- require errors immediately,
- require students to correct errors so that they remember what to do when they encounter similar problems,
- praise students for each correction and,
- use student performance data to make instructional decisions.

**Competencies for Promoting Independence**
- stress the importance of instructional content (i.e., skills, contents, or strategies) and its relevance to daily functioning,
- allow ample time to reach mastery,
- encourage generalization,
- teach effective study skills,
- involve students in goal setting, and point out how their errors relate to goal achievement,
- help students with strategies that foster independent learning (e.g., using mnemonics, clustering information to memorize it, and using self-questioning to ensure comprehension) and,

- model meta cognitive or regulatory self-statements to help students self-instruct, self-monitor, and self-evaluate-Model being a learner.

Bessant – Byrd (1981) proposed that people preparing to teach minority students in special education programmes should be able to:

- demonstrate knowledge of the role of a value system and evaluate its influence on behaviour,

- demonstrate knowledge of the philosophy of various cultures and exhibit an interest in expanding that knowledge,

- use relevant information and materials characteristics of both traditional and contemporary life styles of various cultures,

- understand different patterns of human growth and development within and between cultures,

- recognize potential cultural and linguistic biases in the composition, administration, and interpretation of existing assessment instruments and,

- demonstrate the ability to provide of flexible learning environment which meets individual needs of learners from various culture groups.

Some of the competencies associated with each of the functions required of a special educator serving as a resource teacher were listed out by Blackhurst et al. (1977). They were:

**Assessing Learner Behaviour**

Special educators must be able to use assessment procedures to identify exceptional children. They must also be able to use in-depth diagnostic procedures to identify the educational strengths and weaknesses of children in each major area of instruction. Because many published tests are inappropriate for exceptional children, special educators must also be skilled in informal assessment and in direct observation of student behaviour.
Designing and Implementing Instructional Programme

Once the child's educational needs have been assessed, the special education teacher must design the child's instructional programme. Objectives must be written, and the instructional tasks to be performed must be analysed. Instructional methods must be selected and implemented and student performance must be monitored.

Selecting and Using Instructional Materials

The variety of instructional materials available has grown dramatically in recent years. The quality of these materials varies considerably, however, and the special education teacher must be able to evaluate them and select the most effective. Teachers must know how to use a variety of instructional materials and audio visual equipment.

Managing the Learning Environment

A major responsibility of the special educator is to provide individual instruction. To do so, the teacher must be able to manipulate the many variables in the learning environment. The teacher also needs to develop rapport with students and use such management techniques as preventing indiscipline, behaviour modification, active listening, contingency, contracting verbal and non-verbal signals, and precision teaching.

Providing for the Needs of Children with Sensory and Physical Impairments

Special educators frequently work with children who have impaired vision, hearing, speech or physical functioning. They must be able to modify their instructional approaches to accommodate the special needs of these children. For example, they need to know how to use special assistive and adaptive equipment, how to lift and transfer physically disabled children safely, how to deal with seizures, and how to provide emotional support.

Implementing Resource Teaching Programme

Because exceptional children are increasingly being educated in the regular classroom, the resource teacher must be able to advise the regular classroom teacher on ways to modify instructional programming to improve these children's integration into the regular class. Assistance in sharing materials, approaches, equipment, and ideas is also required. The ability to co-ordinate schedules and the services of ancillary personnel is also an important skill.
Implementing Due Process Safeguards

Special education teachers and school systems are considered legally responsible if the rights of exceptional children or their parents are violated. It is therefore important to have a firm understanding of local, state and federal laws, regulations and guidelines that affect special education programmes. Great care should be exercised in protecting student and parent rights, and special educators should carry liability insurance to cover them in the event of an inadvertent violation. Such insurance is available through professional organizations such as The Council for Exceptional Children.

Working Effectively with Parents

Good parent–teacher interactions are especially important in the education of exceptional children. Children can be educated more efficiently if parents reinforce what happens at school, or they may progress slowly if parents and teachers work at cross-purposes. Therefore, it is necessary to keep communication channels with parents open and maintain a good rapport. Parent conferencing skills are particularly important.

Maintaining Student Records

Accurate, up-to-date records are an important tool in the development of IEP required by the federal law. Teachers should be able to collect, organize, and maintain records of academic performance. It is especially important to maintain a system for evaluating student performance using direct measurement and behaviour charting. Teachers must also respect the confidentiality of student records.

Demonstrating Appropriate Professional Behaviour

Special educators should be able to develop an educational philosophy and demonstrate it in their professional activities. They should be able to facilitate the activities of others in a sensitive, humanistic fashion. They should also be flexible and receptive to educational change. Furthermore, they should conduct their professional activities in an ethical fashion. These general principles provide the foundation for effective teaching.

Blackhurst (1982) concluded that the great majority of the competencies that were identified are competencies that all good teachers should possess, regardless of whether or not they are teaching mainstreamed students.
Center et al. (1991), Murphy (1994), Lewis (1995), Sebba and Ainscow (1996) and many others opine that one of the major factors associated with the success of integration was the level of support and commitment from the staff in the mainstream school, the local authority and the community. If they were fully behind the integration scheme and have been involved in the planning and preparation and were willing to work co-operatively with the support staff, then there was a good chance that the integration will be successful.

Cowne (2000) advises that teachers must have a very clear grasp of eight issues when planning lessons that take IEPs for individual pupils into account.

1. How the principal curriculum objective and key concepts for the lesson relate to the overall schemes for the school.

2. The way in which the principal objectives and key concepts are to be assessed, the criteria which indicate a satisfactory level of skills and understanding of key concepts, ways in which the assessment process might be differentiated and the means by which the outcome of the assessment is to be recorded as part of the IEP.

3. The pre requisite skills for the principal objectives and the prior level of knowledge required to understand key concepts.

4. The extent to which all pupils in the classroom, including those identified as having special learning needs, have the pre requisite skills and prior knowledge in order that any 'pre-teaching' or a different resource to assist access to information, might be arranged.

5. Relevant skills and knowledge that might be cross-referenced from another curriculum area.

6. Ways in which various kinds of group work, with or without additional assistance from adults, might assist learning in the particular lesson.

7. The extent to those pupils with the greatest needs might be excepted to fulfil the principal objectives and grasp all key concepts.

8. Whether an alternative set of objectives will be needed for any children.

Downing, Simpson, and Myles (1990) compared the perceptions of general and special educators concerning non academic skills (e.g. obeys class rules, asks
for help when it is needed, and interacts appropriately with the teacher) typically expected for successful mainstreaming of students with mild emotional or learning disabilities. The researchers note that, in general, both groups of teachers agree that those non academic skills are needed for successful mainstreaming.

Falvey and Rosenberg (1995) in their study stated that for positive social integration and to establish friendships to occur among children with and without disabilities at least the following three conditions must be fulfilled.

1. Opportunity with proximity: Children will be provided with frequent and meaningful contacts.
2. Continuity: Children will be made involved with the same group of children over a relatively long period of time and also seeing some of the same children in their own neighbourhood out of school hours.
3. Support: Children are helped to make contact with other children in order to work and to play with them and if possible supporting directly in maintaining friendship.

Fisher and Reynolds (1981) investigated how teaching competencies for the special educator differ from those of the classroom teacher. Completing over 300 hours of joint direct observations in 20 classrooms (9 resources, 11 grade level), these authors classified the overlapping competencies for both groups into six domains: 1) assess students/maintain records, 2) design/implement instructional programmes, 3) identify/select/use instructional materials, 4) provide a positive/organized learning environment, 5) initiate conferences/communicate, and 6) demonstrate professional characteristics.

All competencies were similar, but there were some differences. 1) In assessment, it was believed important that the special education teacher learn to describe students more precisely and be able to evaluate student performance, using continuous measurement. 2) The special education competencies in instructional programming were also more precise, and were related to the Individualized Educational Programme (IEP) and to daily goals based on assessment (continuous measurement) information collected the day before, and the ability to sequence instruction carefully was felt to be more important. 3) In selecting and using instructional materials, the elementary competencies emphasized - teacher creativity and student involvement; for special education,
emphasis was placed on adapting materials for special needs (sensory impairment, prostheses). 4) To provide a positive/organized learning environment, elementary teachers were required to handle transitions smoothly, attend to students comfort, anticipate responses, handle disruptions and use praise with discretion; special education teachers were required to state rules clearly, use reinforcement contingently, interact with students positively, and modify the physical environment for special needs. Teaching strategies recommended for elementary teachers usually included inquiry, drill, and work with groups, also creative expression and opportunity to explain reasoning. For special education they mainly included developing techniques for shaping responses, using precision teaching data, dealing with seizures, and managing adaptive equipment. Competencies for both elementary and special education were similar in conferencing/consultation and in professional characteristics. The Fisher and Reynold's observations led to the development of a new competency observation evaluation for student teachers in both special and regular classrooms. It highlights the commonalities and the differences in the teaching-related competencies of the two groups.

One of the best competency identification efforts in the area of mainstreaming was done by Gold Hammer, Rader and Reuschlein (1977). They surveyed fourteen colleges and universities that were conducting programmes to prepare regular classroom teachers to mainstream mildly handicapped students. This research yielded a list of some 464 competencies clustered into thirteen areas: nature of mainstreaming, nature of the handicap, attitudes, resources, teaching techniques, learning environment, learning styles, classroom management, curriculum, communication, assessing student needs, evaluating student progress and administration.

Keogh (1990) noted that the key to success for the student with disabilities placed in the general classroom was the general classroom teachers. Factors that deserve consideration include the teacher’s attitude toward having a student with a disability in the classroom, the teacher’s judgement of the student’s capacity to make progress, the teacher’s ability to deal with peer acceptance problems, and the teacher’s skill in dealing with emotional behaviour and problems that may result from the student’s inability to compete academically with other students. It was apparent that the general classroom teacher had an enormous responsibility, and it was important that these teachers receive preparation and support. For example, teacher
assistance teams and coaching were useful types of support. Moreover, a student with a learning disability should not be placed in a general classroom with a teacher who does not believe that the student will profit.

In looking at specific roles and functions of teachers of visually handicapped children and critical factors in the preparation of these teachers it has long been recognized that professional roles differ according to the kind of educational setting in which the teacher functions and the amount of supervision provided (Mackie & Dunn, 1955).

Pugach and Lilly (1984) observed that teacher education programmes frequently reflect the current status of educational practice rather than lead the field toward meaningful change. They stressed the need for teacher preparation programmes to adjust to the predicted changes in the nature of special services for mildly handicapped learners. Some of the implications for personnel preparation discussed by Pugach and Lilly (1984) relate directly to the non categorical viewpoint, especially the need to prepare all teachers to deal with a wide range of abilities and to expect that students will need diverse methods of instruction.

Redden and Blackhurst (1978) reported research directed at identifying competencies of elementary teachers who were mainstreaming handicapped students. Using a research procedure known as the critical incident technique (Flanagan, 1962), 828 specific incidents in which teachers had been either effective or ineffective in their mainstreaming efforts were collected from 184 elementary teachers. After eliminating redundancies, some 271 different tasks were identified that seemed to be important. These tasks were clustered into thirty-one competency statements, which were subsequently grouped into six areas of teachers functioning: developing orientation strategies for mainstream entry, assessing needs and goal setting, planning teaching strategies and use of resources, implementing teaching strategies and utilization of resources, facilitating learning, and evaluating learning. The complete list of tasks is available in Redden’s (1976) work.

Reynolds et al. (1980) carried out a large scale effort at identifying mainstreaming competencies. This work was the topic of a national study conducted in conjunction with the Dean's Grants Projects. Reynolds and his colleagues described ten clusters of competencies as the domains of professional competence that appear to be important for all teachers who were involved in individualized
instruction. These ten domains were curriculum, teaching basic skills, pupil and class management, professional consultation and communications, teacher parent relationships, student-student relationships, exceptional conditions, referral, individualized teaching, and professional values. A useful document, titled "A common body of practice for teachers: The challenge of PL 94-142 to Teacher Education was published by the American Association of Colleges for Teacher Education as a result of this work. A series of knowledge – base reviews and resource units were also developed, based upon the ten clusters of competence.

Sass-Lehrer, Marilyn (1986,1986a) assessed competencies for effective teaching of hearing impaired students. Supervisors (N=150) of programmes for the hearing impaired rated a set of 40 competencies for teachers of elementary level, hearing impaired students. Seven of ten competencies identified as critical to teaching effectiveness reflected the broad area of instruction and instructional planning skills, almost half of which related to assessment.

They also studied competencies critical to teachers of hearing impaired students in two settings. Finding of a study of 150 supervisors’ ratings of competencies critical to effective performance of teachers of elementary level hearing impaired pupils indicated that teachers in different educational settings have differing views of the competencies most critical to their jobs.

Schumm and Vaughn (1992) surveyed general educators at the elementary, middle and secondary school levels to determine their attitudes about planning as well as their planning practices for students with disabilities. Some of the findings from their study include the following.

1. Planning practices differ across grade levels. Middle and Secondary school teachers frequently responded that mainstreamed students with disabilities should be prepared to cope with the demands of the general curriculum. To illustrate these findings, Schumm and Vaughn included a representative comment from a teacher expressing this belief: “there is absolutely no time for mainstreamed students-they adapt to the programme, the programme does not adapt to them”.

2. Many Teachers feel under prepared by their teacher education programmes to work effectively with mainstreamed students.
3. Overall, teachers were willing to have mainstreamed students in their classrooms "as long as they do not exhibit emotional or behavioural problems".

Spungin (1977) drafted the competencies of special teachers which include 12 goal areas reflecting seven teaching activities: assessment and evaluation, educational and instructional strategies, guidance & counseling, administration and supervision; media and technology; schools; agencies, community relations and research. The twelve goals that emerged were

- teacher will demonstrate knowledge of normal and a typical developmental patterns in visually handicapped learners,
- teacher will demonstrate the ability to assess visually handicapped learners using a variety of informal and formal procedures,
- teacher will demonstrate the ability to select design and or modify specialized curricula for visually handicapped learners,
- teacher will demonstrate proficiency in the operation of media and devices necessary for the education of the visually handicapped learner,
- teacher will utilize instructional strategies which facilitate learning in visually handicapped children.
- teacher can effectively utilize instruction materials, media, devices, aids etc appropriate to the individual needs of visually handicapped children,
- teacher will demonstrate ability to utilize local, state and national resources to assist in the delivery of services to the visually handicapped learner,
- teacher will demonstrate knowledge and opportunity for research with visually handicapped children,
- teacher will accept responsibilities of being a member of the teaching profession and will make a commitment to improve services for visually handicapped learners,
- teacher will demonstrate ability to administrative and supervise programmes for visually handicapped learners, including ancillary personnel, para professionals and volunteers and,
- teacher can demonstrate the ability to evaluate both instructional sequences and overall programme effectiveness of various school programmes and agencies serving visually handicapped learners.
Toon (1988) found that the staff involved in ten British integration schemes were extremely positive about the overall benefits to the pupils with learning difficulties and their peers.

Westwood (1993) pointed out that developments towards greater integration were based on the assumption that teachers would have a positive attitude towards accepting pupils with disabilities into their classes.


2.2.4. Studies on Teachers Competencies to handle Learning difficulties in Children.
Studies on teachers' competencies to handle learning difficulties in children were listed out under this heading.

Cecil D. Mercer (1997) explains that elementary school age range has received the most emphasis in the area of learning disabilities. During second through sixth grade, academic learning problems become apparent, and ability achievement discrepancies emerge. Social-emotional problems also become more of a factor during the elementary grades. Diagnosis usually is accomplished through ability and achievement tests. As with all ages, direct instruction in the skill areas for this group is an important intervention component.

Cecil D. Mercer also explains that from a teacher's perspective, a material-with student arrangement not only provides students with opportunities to improve achievement but also allows the teacher some freedom to work with small groups or individual students. Although planning seatwork activities and teaching students to work independently are time consuming, they are worth the effort. Well-designed material-with student activities can make the school year pleasant and productive.

Conte, Richard and others (1995) introduced a classroom based social skills intervention for children with learning disabilities. A social skills programme for
learning disabled children consisting of coaching, role-playing and information sharing was implemented over a 6-month period by a clinical psychologist in collaboration with classroom teachers. When compared to the control group, participants in the experimental programme demonstrated greater social acceptance and improved social problem-solving skills.

Ellis, Edwin and Others (1993) identified practicing master teachers' perceptions of the functional differences between beginning teacher competencies in general elementary education and those in special education for elementary students with mild learning and/or behaviour problems. Two groups, composed of six special education teachers and six general education teachers, worked to sort and label competencies pertinent to general education, special education, and both. The two groups then met to form a single list of competencies reflecting a consensus of opinion. Both general educators and special educators relied heavily upon formal knowledge (i.e., competencies identified by professional organizations or those in the published literature). No competencies were identified by either group solely based upon informal knowledge. Many of the same competencies were selected by both groups, yet there was some variation in the source of formal knowledge selected. Only a few competencies were identified exclusively for general education or exclusively for special education. Results imply that practicing master teachers may be very much aware of the similarities in general and special education and perceive the differences as minimal.

Frith (1991) suggested the following support systems to teachers to support homework activities.

a) Use peer tutoring for checking and assessing homework and for giving corrective feedback.

b) Use computer-assisted instruction for students who have access to computers.

c) Encourage parents to support the value of homework with their actions and words.

d) Develop monitoring systems (such as graphs or checklists) for homework.
Haines and Torgesen (1978) found that learning difficulty students with reading problems performed better on memory tasks when they become more active in the learning task through most efficient strategies such as rehearsal.

Hallahan and Kauffman (1991) have the firm opinion that if teachers were better prepared to tackle the special learning problems of children in the early school years some learning disabilities could be avoided.

Hastings et al. (1996) showed that the attitude of student teachers towards pupil with severe learning difficulties were more positive if they had previous contact with such pupils and that lectures they received on the topic were not in themselves sufficient to bring about a change in attitude.

Hudson, Morsink, Branscum and Boone (1987) examined the literature relating to areas of competency for teachers of students with learning disabilities. These competencies were synthesized from professional opinions, empirical research, descriptive studies and topical reviews. Competency statements were identified within five areas: general and special education, planning and evaluation, curriculum content, clinical teaching strategies, and behaviour management. The majority of these related to cognitive interventions, and included the following.

1) The implementation of programmes which help students engage in self-monitoring behaviour, predicting outcomes, and other deliberate attempts to study and learn.

2) The selection of appropriate clinical strategies for individual students (for eg., how a student can become a more efficient decoder in content or in solution.

3) The involvement of students as active respondents in learning tasks rather than as passive recipients of instruction.

4) The reduction of impulsive behaviours and increase of problem solving techniques.

These statements are generic rather than specific in nature as a reflection of the vast heterogeneity of students with learning difficulties. However, they do provide a guide for possible content in teacher training courses as well as a direction for applied research.
In a study of parents of students with learning disabilities, Kay, Fitzgerald, Paradee and Mellencamp (1994) examined parent perspectives on homework. They found that parents felt inadequate to help with homework. They desired more information on how to help their children with homework and wanted a two-way communication system that would help them become partners on their child's instructional team. Initially, the teacher should send a letter to parents regarding homework policies and practices. Because letters do not always represent a functional medium of communication to homes, it may be necessary for the teacher to discuss homework in parent conferences, at PTA meetings, on the telephone. Information for parents should include a) the purpose of homework, b) the expected frequency of homework, c) the approximate amount of time assignments should take, d) homework evaluation procedures, e) effects of homework evaluation procedures, e) effects of homework on grades and f) suggestions for parents on how to help with homework.

Kronick (1988) has listed 19 skills in social skill area that the teacher should assess and provide practice in. They were:

- a) identifies and names another person's feelings,
- b) expresses his/her own feelings in an appropriate manner,
- c) possesses alternate behaviours for expressing emotion,
- d) brings others around to see his/her point of view,
- e) empathizes with the point of view of others,
- f) can imagine and role play social events,
- g) notices non-verbal expressions of mood and emotion,
- h) respects physical space of others, uses his/her own body appropriately,
- i) uses clues about others (clothes, grooming, posture, etc.) to understand them and to behave appropriately,
- j) understands the social meaning of house, office, and store layouts,
- k) understands single and multiple relationships among people-grandparent, boss, doctor, niece, etc.,
- l) understands average capabilities at each stage of life,
- m) can tell time, days, weeks, seasons, holidays, their sequence, and the behaviours associated with them,
n) shares in turn-taking in conservations,
o) expresses gratitude to those who have put themselves out for her/him,
p) knows when to stop talking and talks appropriately (on topic, moderate pitch, suitable vocabulary),
q) recognize the impact of his/her behaviour on others,
r) can plan an experience with a friend and,
s) can function independently when appropriate.

Mueller, Chase and Walden (1988) state that occasionally, a teacher can manage with the help of additional materials such as a supplementary reading series, learning strategy materials, computer assisted instruction, content enhancement materials or manipulative materials for math. To be successful the teacher must have a reasonable student – teacher ratio (e.g. mild – 20s to 1, or lower), especially in the earlier grades.

Niersthemer, Susan L. Hodges (1996) attempted to understand the pre-service teachers' belief about children experiencing difficulty learning to read. This study examined the pre-service elementary education teachers' knowledge and beliefs about children who were at risk of failing to learn to read and what these future teachers believe they should do to help these children. The teacher candidates were enrolled in a redesigned corrective reading methods course with a tutoring practicum where features of the Reading Recovery Professional Development Model were infused. The results revealed that, as elementary education pre-service teachers enter a newly designed corrective reading course the pre-service teachers generally believe that elementary children's reading problems are caused by sources outside of school. They also believe that it is not their responsibility as future classroom teachers to help these children, rather, the responsibility belongs to someone else. But after teacher candidates participated in the course, they shifted in their beliefs toward assuming responsibility for helping children with reading problems. One of the primary factors involved in their shifts in beliefs appeared to be the use of features of the Reading Recovery Professional Development Model in the tutoring component which influenced students' abilities to select appropriate instructional practices and focus on the needs of individual children.
In US National Joint Committee on Learning disabilities a position paper on the preparation of professional personnel in the field of learning disabilities (1987) defined seven problem areas and issues in structuring training courses. Three were specifically related to the issues of broadening the understanding of the methodology and value of integrated cognitive interventions.

Firstly, the ability to effect changes in educational policy, curricula and practice has been impeded by the organizational complexity and rigidity of educational institutions. This problem was similar to that faced by schools and systems where the need to change teaching/learning approaches is confronted by strong pressures to persist with existing strategies. It would appear that the wealth of literature available to teacher educators on the value of cognitive interventions is infrequently translated into lecture content.

Secondly, the goals of professional education differ from those of accrediting, certifying or licensing agencies and this difference often has a negative effect on curriculum and training policy. The pressure to produce “employable” graduate was important in times of reduced enrolments and the temptation to teach to the employer’s needs, rather than to innovative strategies was great.

Thirdly, many university faculties were distanced from the realities of educational systems and were resistant to modification in professional education and training programmes. In contrast to the previous problem area, many instructors in higher education institutions were either not in touch with innovative classroom strategies or fail to incorporate them in their teaching courses. Hence, they may not make students aware of the potential of innovative techniques. The position paper concluded that problem areas must be examined and solutions be found either before or concurrently with bold changes in academic curricula and practical experience.

These problem areas and issues, together with others discussed in the position paper, highlight the need to produce professionals with knowledge of all relevant strategies, so that they may provide appropriate and effective service delivery. The National Joint Committee Position Paper recommended that training should allow for interdisciplinary input in such topics as educational, theory and practice in learning disabilities (P 230).
Pugach, Marleen, Wesson and Caren, (1995) investigated teachers' and students' views of team teaching of general education and learning disabled students in two fifth – grade classes. Based on interviews with nine learning-disabled students, nine of their non-disabled peers, and their three teachers, this article describes their perceptions of life in two fifth – grade classrooms with a permanent teaching team. Data were organised according to respondents' perspectives on three themes: 1) classroom social climate, 2) instructional effect, and 3) distribution of teachers’ roles and tasks.

Purkey (1978) maintains that the teacher has the power to invite each student to learn. Teacher expectations, encouragements, evaluations, attentiveness, and attitudes greatly influence student's perceptions of themselves as learners. Given that many students with learning disabilities have negative perceptions of their academic abilities, it is important that general and special education teachers create and maintain a supportive classroom setting for them. When the teacher was cheerful, supportive, and enthusiastic, students tend to feel more comfortable and model those actions and attitudes. This can result in a pleasant, productive learning environment for all learners. Teachers easily can notice when things go wrong in the classroom and provide remediation.

Reynolds (1992) reported that competent teachers reflect on their teaching to find out what teaching behaviours were successful and unsuccessful with students. This process helps them to refine their teaching practices. She notes that reflection occurs during interaction with students as well as after interactions. During interactions, teachers gather information from student comments, actions and written work to determine levels of student understanding. These multiple forms of assessments provide information that enables teachers to reflect on what practices are effective or ineffective and to improve their teaching. Reynolds notes that as teachers gain experience and become competent, their reflections change from concerns about classroom management, the quality of their explanations, how they respond to questions, and student participation to concern about student understanding and instructional events that seem especially noteworthy. It was believed that with experience, teachers develop a system for organizing, understanding and using the enormous amount of information gained from experience. Because of the learning differences of student understanding is important in guiding teachers to make adjustments that enable them to succeed.
Sally Beveridge (1996) stated that the teacher's attitudes, knowledge and communication skills were essential factors to handle learning difficulties in children. Teachers need to demonstrate positive attitudes towards children with learning difficulties and their parents, through –

- expressing concerns about a child's learning difficulty in constructive ways,
- viewing identification of difficulty as a first step to meeting a child's needs,
- showing genuine care, concern and respect for both children and parents,
- acknowledging the distinctive knowledge, skills and experience of parents and the complementary roles that parents and teachers have in children's learning and,
- showing commitment to openness and a full sharing of information with parents.

Their attitudes will be affected in part by their knowledge and understanding for eg.,

- the nature of children's learning difficulties,
- classroom-based assessment and intervention strategies and,
- parental rights, roles and responsibilities where teachers were more knowledgeable and informed, they were likely to communicate a more positive approach to both children and parents, and to have greater confidence in their own competence.

Effective communication skills were central in establishing relationships with parents. All teachers need to feel both skilled and confident in:

- giving parents clear and accurate information with both honesty and sensitivity and,
- active listening skills to elicit parents' views and show that these are valued.

Study conducted by Smith Sally (1993) presents answers to common questions on meeting the needs of students with learning disabilities (LD) in regular classrooms. Their article 'Enabling the learning disabled' describes LD, offers instructional strategies and discuss teaching abstract concepts, student self-esteem,
student depression, teacher emotions, inclusive education, how to tell whether someone has LD, and where to get more information.

To sum up, the study of Hudson et al. (1987) examined the literature relating to areas of competency for teachers of students with learning difficulties. Niersthemer (1996) attempted to understand the pre-service teacher's belief about children experiencing difficulty in learning to read. Ellis et al. (1993) studied the functional differences between beginning teacher competencies in general elementary education and those in special education for elementary students with mild learning and/or behaviour problems. Smith sally (1993), Mueller et al. (1988), Firth (1991), Conte et al. (1995) and Pugach et al. (1995) discussed instructional strategies to handle learning difficulties in children. Only limited number of studies are quoted on teacher competencies to handle learning difficulties in children.

2.3. An Overview of the literature Reviewed


On the other hand, good number of studies have also been conducted abroad on learning difficulties. [Affleck et al. 1988, Baiden 1984, Case, Catherine V. Morsink 1983, Coronado V. Marco 1995, Crisfield 1996, Haines and Torgesen 1978,
Holcomb et al. 1995, Hudson et al. 1987, Kavitha Milner 1999, Lisa Pericola 1997, Niersthemer 1996, Pugach et al. 1995, Reynolds 1992, Smith Sally 1993]. Many of these studies are concentrated on the competencies required for teacher to handle normal children, disabled children and children with learning difficulties. This review of literature itself shows that, to a greater extent, the teacher training programmes have incorporated learning difficulties components in their training curriculum. Whereas in India attempts have not been made effectively to incorporate the learning difficulties concepts in teacher training curricula at primary level.

At this point, research studies to identify the required competencies to handle children with learning difficulties are the need of the hour, particularly in a country like India where wastage and stagnation are more. Further, the effect of personal variables of the teachers on competencies required to handle learning difficulties in children will help to recruit right type of teachers to handle those children. The present study is an attempt in this direction and the methodology adopted in this investigation is presented in the forthcoming chapter.