5.0. Summary

After a dedicated investigation for a period of two or more years, the investigator arrives at certain scientific conclusions. The worth of his investigations and the values of his findings largely depend on how the investigator summarises his research in a systematic way for others to understand and to follow or apply, if necessary. This chapter serves as a platform for this purpose for the researcher. This chapter highlights the rationale for selecting this problem, enumerates the objectives and the related hypotheses, specifies the need and importance of the study. Also, this chapter recapitulates the process applied and the products obtained. Yes, this chapter outlines the methodology adopted and lists out the findings arrived at. In addition, this chapter lays out the possible constructive suggestions for further research. Further, this chapter amplifies the implications of the study besides indicating the limitations of the study.
5.1. Introduction

Human resource development can be accelerated by providing qualitative education to the people. Realising this, the Government of India initiated several programmes such as – formal education, non-formal education, adult education, SSA, RMSA and so on to achieve cent percent literacy and to materialise the objective of Universalisation of Primary Education. In this pursuit, the government of India has started several schools at the state and the central levels. The respective state governments have also been giving more importance to school education since Independence. For the past 60 years, the government has been trying its level best to provide well trained human resources and physical resources to the school education. Presently S.S.A is playing a decisive role in this regard.

In spite of all these efforts, wastage, stagnation and dropout rate at primary level are alarming. Even though poverty, ignorance of parents about education and low social status of the people are the causes of dropout at primary level, one may not ignore the difficulties faced by the students in learning particularly the languages and mathematics. Due to the learning difficulties experienced by the students, many students are unable to attain even the basic literacy skills at the age of 10. The concept of learning difficulties is a new one to the Indian teachers. All these years, educationists have concentrated more on physical and human resources ignoring the learning difficulties in children. Unless learning difficulties in reading, writing and spelling, particularly in foreign languages like English are identified and recognised as the hurdles in learning and the ways and means are devised to overcome such difficulties, it is not possible to arrest wastage, stagnation and drop out in our school system. In other sense, cent percent literacy and Universalisation of Elementary Education may not be possible in the Indian sub continent without circumventing specific deficiencies in children.
Learning disabled children are those children who exhibit a disorder in one or more of the basic psychological processes involved in understanding or in using spoken or written languages. These are manifested in disorders of listening, thinking, talking, reading, writing, speaking or arithmetic. They include conditions which have been referred to as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, developmental aphasia etc. They do not include learning problems which are due primarily to visual, hearing or motor handicaps, to mental retardation, emotional disturbance or to environmental disadvantage.

Children with learning difficulties experience a wide variety of characteristics. Children with learning difficulties generally encounter problems in areas such as reading, writing, spelling, computing, playing games and in socialising. Some may be socially clever with highly developed social skills but they may lag behind their peers academically. Children with learning difficulties exhibit less acceptable social behaviours in a number of situations. They are generally rejected by their peer group. Further, these students are more likely to assign negative traits to these children. Learning disabled children exhibit significant deficiency in interpersonal and self-related behaviours such as accepting authority, more negative perceptions of their intellectual abilities and more feelings of insecurity. They use shorter sentences and they keep silence in a major part of their interactions with others. Females are generally sensitive to age differences. Further, these children exhibit oral reading deficiencies, short-term memory deficiencies and comprehension deficiencies. Attention difficulty, perceptual problems, poor motivation or attitude, poor sound symbol associations, memory problems and language deficiencies are common in children with learning difficulties. Besides, writing activity frustrates these children. Their writing is slow with poor hand writing skills. Spellings are as awful and difficult as grammar and syntax. The spelling errors are inconsistent. Some learning disabled students have right and left-hand disorientation.
It is not possible to easily specify the causes of learning disabilities. The causes may be classified into three categories such as organic, biological genetic and environmental factors. These children exhibit a dozen of morphic characteristics. Further, these children manifest linguistic processing deficiency.

Sometimes teachers are aware of these aspects; sometimes they do not have adequate knowledge about the methods and techniques to circumvent the specific deficiencies. So there is a greater need for teachers to develop adequate awareness about learning difficulties.

The identification of these learning difficulties, at an early age, is necessary to root out these difficulties. Research studies focusing attention on various aspects of learning difficulties are negligible in the Indian context. But in the western world, numerous studies have been made. Some such studies are: Hartley (1995), Helandar (1983), Lerner (1982), Tucker et al (1982) and Wallace & McCoughlin (1979) have studied the prevalence of learning difficulties; Carroll & Chall (1975), Ellis (1982), Nelson & Warrington (1974), Newcomer & Barembeum (1991) and Miles (1997) have concentrated on communication related problems; Duffy & McAnultly (1990), Livingstone (1993), Njiokiktijien (1993) and Roser (1994) on health problems and; Mare (1981); Mark Selikowitz (1993) and Sgori (1989) have focussed on social and emotional problems of learning disabled children.

In Indian context, only a few studies have been conducted so far. Sivakami (2000) Kusuma Harinath (2001) Raganath (2005), Sarojini (2000) have probed into the area of learning difficulties.

Comprehensive studies covering the different aspects of learning difficulties from identification to development of remedial strategies to overcome the difficulties are more warranted. Such studies can facilitate the goal of achieving Universalisation of Primary Education and cent percent literacy. The already available studies have made
their focus on learning difficulties at primary level. But there are students with learning difficulties at secondary level as well as at higher secondary level. Adequate attempt has not been made to probe into this area.

Higher secondary stage is the critical stage in the career as well as life of the students. It provides the turning point to the aspiring students. It is the gateway to professional courses and other higher education programmes. At this level also, there are students with learning difficulties. Teachers have to identify these students and devise special strategy to circumvent their specific deficiencies. As these students are also an integral part of our human resource, it is not possible to ensure optimum human resource development without making them as strong as others. This warrants special attention on the part of the teachers. But teachers handling these students at the most critical stage do not have adequate knowledge about learning difficulties. Hence an earnest attempt has been made in this study to assess the awareness of higher secondary teachers about learning difficulties and their attitude towards students with learning difficulties.

5.2. Title of the Problem

‘Awareness and Attitude of Higher Secondary Teachers towards Learning Difficulties in Students’

5.3. Objectives of the Study

1. To study the level of awareness of higher secondary teachers about the different aspects of learning difficulties in students.

2. To study the higher secondary teachers level of attitude towards different aspects of learning difficulties in students.

3. To find out the significant difference, if any, in the awareness of higher secondary teachers about the different aspects of learning difficulties in students due to variation in their gender.
4. To find out the significant difference, if any in the awareness of higher secondary teachers about the different aspects of learning difficulties in students due to variation in their age.

5. To find out the significant difference, in the awareness of higher secondary teachers about the different aspects of learning difficulties in students due to variation in their educational qualification.

6. To find out the significant difference, if any, in the awareness of higher secondary teachers about the different aspects of learning difficulties in students due to variation in their training in special education.

7. To find out the significant difference, if any in the awareness of higher secondary teachers about the different aspects of students with learning difficulties in students due to variation in their years of experience.

8. To find out whether there is any significant difference, in the awareness of higher secondary teachers about the different aspects of learning difficulties in students due to variation in the location of the school.

9. To find out the significant difference, if any, in the awareness of higher secondary teachers about the different aspects of learning difficulties in students due to variation in their nature of the school they are working in.

10. To know whether there is any significant difference, in the awareness of higher secondary teachers about the different aspects of learning difficulties in students due to variation in their subject of teaching.

11. To find out the significant difference, if any in the awareness of higher secondary teachers about the different aspects of learning difficulties in students due to variation in the type of the school they are working in.
12. To assess the significant difference, if any, in the attitude of higher secondary teachers towards the different aspects of learning difficulties in students due to variation in their gender.

13. To assess whether there is any significant difference, in the attitude of higher secondary teachers towards different aspects of learning difficulties in students due to variation in their age.

14. To know whether there exists any significant difference, in the attitude of higher secondary teachers towards different aspects of learning difficulties in students due to variation in their educational qualification.

15. To measure the significant difference, if any, in the attitude of higher secondary teachers towards different aspects of learning difficulties in students due to variation in their training in special education.

16. To measure whether there is any significant difference, in the attitude of higher secondary teachers towards different aspects of learning difficulties in students due to variation in their years of experience.

17. To find out whether there is any significant difference, in the attitude of higher secondary teachers towards different aspects of learning difficulties in students due to variation in the location of the school.

18. To assess the significant difference, if any, in the attitude of higher secondary teachers towards learning difficulties in students due to variation in the nature of the school they are working in.

19. To know whether there is any significant difference, in the attitude of higher secondary teachers towards different aspects of learning difficulties in students due to variation in their subject of teaching.
20. To know the significant difference, if any in the attitude of higher secondary teachers towards different aspects of learning difficulties in students due to variation in the type of the school they are working in.

21. To find out the relationship between awareness and attitude of higher secondary teachers towards each aspect of learning difficulties in students.

22. To study how far and to what extent the independent variables (Gender, Age, Educational Qualification, Training in Special Education, Subject of Teaching, Years of Experience, Location of School, Nature of School, Type of School), influence the dependent variables (Awareness and Attitude) of the higher secondary teachers in dealing learning difficulties in students.

5.4. Assumptions of the Study

1. It is possible to develop a tool to assess the level of awareness of higher secondary teachers about various aspects of learning difficulties in students.

2. It is possible to develop a tool to assess the level of attitude of higher secondary teachers towards various aspects of learning difficulties in students.

3. The level of awareness and the level of attitude of the higher secondary teachers may vary due to variation in their gender, age, educational qualification, experience, location of the school, type of school and the subject of teaching.

4. There may be a significant relationship between the awareness and the attitude of higher secondary school teachers with reference to learning difficulties in students.

5. It is possible to predict the influence of independent variables of the higher secondary school teachers on their awareness and attitude towards LD in students.
5.5. Hypotheses of the Study

1. There exists significant difference in the awareness of higher secondary teachers’ about the different aspects of learning difficulties in students due to variation in their gender.

2. There exists significant difference in the awareness of higher secondary teachers about the different aspects of learning difficulties in students due to variation in their age.

3. There exists significant difference in the awareness of higher secondary teachers about the different aspects of learning difficulties in students due to variation in their educational qualification.

4. There exists significant difference in the awareness of higher secondary teachers about the different aspects of learning difficulties in students due to variation in their training in special education.

5. There exists significant difference in the awareness of higher secondary teachers about the different aspects of learning difficulties in students due to variation in their years of experience.

6. There exists significant difference in the awareness of the higher secondary teachers about different aspects of learning difficulties in students due to variation in the location of school.

7. There exists significant difference in the awareness of higher secondary teachers about different aspects of learning difficulties in students due to variation in the nature of school the teacher are working in.

8. There exists significant difference in the awareness of higher secondary teachers about different aspects of learning difficulties in students due to variation in their subject of teaching.

9. There exists significant difference in the awareness of higher secondary teachers about different aspects of learning difficulties in students due to variation in the type of school they are working in.
10. There exists significant difference in the attitude of higher secondary teachers towards different aspects of learning difficulties in students due to variation in their gender.

11. There exists significant difference in the attitude of higher secondary teachers towards different aspects of learning difficulties in students due to variation in their age.

12. There exists significant difference in the attitude of higher secondary teachers towards different aspects of learning difficulties in students due to variation in their educational qualification.

13. There exists significant difference in the attitude of higher secondary teachers towards different aspects of learning difficulties in students due to variation in their training in special education.

14. There exists significant difference in the attitude of higher secondary teachers towards different aspects of learning difficulties in students due to variation in their years of experience.

15. There exists significant difference in the attitude of higher secondary teachers towards different aspects of learning difficulties in students due to variation in the location of school.

16. There exists significant difference in the attitude of higher secondary teachers towards different aspects of learning difficulties in students due to variation in the nature of school they are working.

17. There exists significant difference in the attitude of higher secondary teachers towards different aspects of learning difficulties in students due to variation in their subject of teaching.

18. There exists significant difference in the attitude of higher secondary teachers towards different aspects of learning difficulties in students due to variation in their type of school they are working in.
19. There is significant relationship between awareness and attitude of the higher secondary teachers towards each aspect of learning difficulties in students.

20. The independent variables such as gender, age, educational qualification, experience, location of the school, type of school and the subject of teaching may influence the dependent variables i.e. awareness and attitude. The predictors may significantly contribute to awareness and attitude.

5.6. Scope of the Study

In a populous country like India there are a number of students with learning difficulties. If the learning difficulties are not properly tackled, it will lead to dropout, wastage and stagnation. According to the available statistics, learning disabled children constitute about 10% of the student population. These children require immediate attention and care to have education so that they also can lead a better life like the other people.

The main focus of the study is to assess the awareness of the teachers about the various aspects of learning difficulties such as concept of learning difficulty, characteristics of the students with learning difficulties, causes of learning difficulties, instructional strategies for the students with learning difficulties and guidance and counselling required for the students with learning difficulties. The study also attempts to assess the attitude of the higher secondary teachers towards the different aspects of learning difficulties.

Here attempts are made to identify the concept of learning difficulties that need attention or priority for generation of higher secondary teachers' awareness and attitudinal development through in-service training and pre-service education. The study also aims to find out the relationship between the awareness and attitude of higher secondary teachers in dealing with students with learning difficulties. The study further attempts to know how far the variations in independent variables such as gender, age, educational qualification,
years of experience, location of school, nature of school, type of school, training in special education, and subject of teaching, bring out significant differences in the awareness and attitude of higher secondary teachers teaching students with learning difficulties.

The study also attempts to predict to what extent and how far the independent variables such as teachers’ gender, age, educational qualification, training in special education, subject of teaching, years of experience, location of school, nature of school and type of school contribute to the dependent variables. i.e. teachers’ awareness and attitude by applying stepwise multiple regression analysis. In any research, the variation in the independent variables of the teachers may have their own effect on their performance.

The study will help to assess the teachers' present level of awareness and attitude, facilitate to draw a systematic plan to educate the students with learning difficulties, organize effective training programmes for teachers and incorporate appropriate components related to different aspects of learning difficulties in DTE and B.Ed., courses training curricula.

5.7. Need and Importance of the Study

Educationists and educators must have adequate awareness about the far reaching implications of learning difficulties. Recent estimate reveals that the learning disabled children constitute about 10 to 15% of the student population. These children are the integral part of our human resource. They are the future citizens of India. They will be the pillars of the country in future. Hence, it is the primary duty of the teachers to ensure that each pillar is as strong as the other. To achieve this objective, teachers must be aware of learning difficulties in children. Then only they can identify the children with specific difficulties and make effort to surmount such difficulties. Hence, the studies of this type are more warranted in Indian context. This study is an earnest attempt in this regard.
Learning disabled children are there at every level of our educational system. If these children are left out without proper attention, it naturally will lead to increase in drop out, wastage and stagnation and the concepts like Universalisation of Primary Education and Cent Percent Literacy will be a myth and a distant dream in the Indian sub-continent. Realizing this, the National Conference on Learning Disabilities in Chennai (1996) and National Seminar on Curricular Trends in Special Education (1999) held in Osmania University, Hyderabad, proposed a series of measures to help children with learning difficulties. One such measure is conducting the need based socially relevant researches on various aspects of learning difficulties in children from identification to remediation (Reddy, 1999). Even if the needed facilities are provided, unless and until the field of learning disabilities is recognized and addressed properly, it is not practically possible to check the problem of wastage, stagnation and drop out in Indian school system.

Catering to inclusive education in ordinary schools is much more than a process of opening the school doors to admit children previously placed in special schools. The challenge of implementing inclusive education as well as social integration of all children irrespective of their achievement levels will be achieved only if the teachers possess more knowledge about learning difficulties. Hence, the task before the contemporary society is to provide resources and conditions to face the challenges that emerge out of learning difficulties. The teacher should possess some specific competencies in assessment, planning individualized educational programme apart from guidance and counselling. Then only inclusiveness can be successfully promoted at school level. To promote such required awareness this study has been attempted.
It is of paramount importance to study the level of teachers’ awareness about learning difficulties. Unless the teachers have adequate knowledge about the basic concepts and facts of learning difficulties, it is highly impossible to assess the learning difficulties of the students and their associated problems. If a teacher fails to assess the learning difficulties of the students in the early stage, the chances are very high to put the children into immense hardship in pursuing their education.

In Indian context, studies have been conducted on teacher awareness about learning difficulties. (Dharmaraj, 2000; Sarojini, 2000; Selvakani, 2000; Sivakami, 2000; Nagomi Ruth, 2000 and Kusuma Harinath, 2000). The role performance and problems faced by special education teachers were also identified by Reddy (2000). Sivakami (2000) and Santhakumari (2003) studied the effectiveness of instructional strategies like cognitive and metacognitive strategies in overcoming learning difficulties in English by the students. Kusuma Harinath (2000) studied the factors related to learning disabilities among students.

The researches quoted above are more of western origin. Specific studies have not been conducted in Indian context. Here and there, attempts are made to identify learning difficulties in students (Ashum Gupta and Anju Garg 1995; Reddy, 1999; sivakami, 2000). Education, being one of the essential inputs for better living, its’ universalization among the LD student population also assumes significance. The earlier the identification, the better will be the effectiveness of the provision of services. Provision of special learning aids, materials and equipments duly supported by the trained personnel determines the quality of education for the LD children (NCERT, 1987). The studies covering the effect of personal variables (gender, age, educational qualification, training in special education, subject of teaching, years of experience, location of school, nature of school, type of school) on the awareness and attitude of the higher secondary school teachers to handle learning disabled students will help a lot to plan and organize need based specific pre-service and in-service training programmes.

As already stated, the research done in special education particularly on teachers’ awareness and attitude with regard to children with learning difficulties is very limited in India and such studies are more warranted. Studies that focus their attention to assess the awareness and attitude of normal school teachers will give a clear cut picture about the existing scenario and will pave way for better policy planning and organization of training programmes for teachers working in normal schools. Further, it also gives an idea about the effect of independent variables on the teachers’ awareness and attitude so as to plan for development of specific need-based and situation oriented training programmes.
5.8. Methodology

The methodology followed in this survey study is discussed under different subheadings namely construction of research tools, construction of learning difficulties awareness scale, construction of learning difficulties attitude scale, pilot study, establishing the validity and reliability of the research tools, locale of the study, sample and sampling technique, data collection and statistical techniques used in the study.

5.8.1. Construction of Research Tools

The tangible outcome of the research depends upon the quality of the data. The required data are collected by using appropriate research tools. After a thorough study of related literature and considering the tools used by the previous researchers, the investigator developed the following research tools to study the awareness and attitude of the higher secondary teachers with regard to learning difficulties among the higher secondary students.

i. Learning Difficulties Awareness Scale

ii. Learning Difficulties Attitude Scale

5.8.1.1. Construction of Learning Difficulties Awareness Scale

One of the main objectives of the study was to study the awareness of the teachers about learning difficulties in students. The investigator delved into the available literature and relevant works in the specific area. After developing a thorough insight into learning difficulties, the investigator constructed an awareness scale which included the following major aspects.

- Concept of learning difficulties
- Characteristics of students with learning difficulties
- Causes of learning difficulties
- Instructional strategies for students with learning difficulties
- Guidance and counselling to the parents and students with learning difficulties

The rating scale comprises sixty four items in total. Against each statement, three gradations are given, namely awareness to greater extent, awareness to certain extent, and no awareness. For positive statements, the scoring is 3, 2 and 1 and for negative statements the scoring is in reverse order. The English version of learning difficulties awareness scale is given in Appendix-A. To know the personal information about the teachers, details regarding gender, age, educational qualification, training in special education, subject of teaching, years of experience, location of school, nature of school, type of school have been included in the Part – I of the rating scale.

5.8.1.2. Construction of Learning Difficulties Attitude Scale

The second important objective of the study is to assess the attitude of the teachers towards learning difficulties in students. For this purpose, the investigator developed an attitude scale. This rating scale also consists of sixty four statements covering five major aspects of learning difficulties.

Against each statement, five gradations are given namely, strongly agree, agree, undecided, disagree and strongly disagree having the scores 5, 4, 3, 2 and 1 respectively for the positive statements and for negative statements the scoring is in reverse order. In total, there are sixty four statements. The English version of learning difficulties attitude scale is given in Appendix-B.

5.8.1.3. Pilot Study

The investigator made a pilot study on a few teachers. The purpose of the pilot study was to adjudge the suitability of the statements and the appropriateness of the scale to the teachers. In this
connection the two developed scales (i.e.) awareness and attitude assessment rating scales were administered to 43 selected teachers in the study area (10% of the total sample).

5.8.1.4. Establishing the Reliability of the Tools

To find out the reliability of the tools, the investigator employed Kuder Richardson estimates which is based on the reasoning used in the split half method. The obtained $r_{11}$ value of the awareness rating scale is very high (0.97) indicating the reliability of the scale used in the study. The obtained $r_{11}$ value of attitude scale is also very high (0.99) which substantiates the reliability of the scale used in this study.

5.8.1.5. Establishing Validity of the Scales

The statements in both the scales are based on the review of related literature and consultation with field experts. They testified to the content and construction of the tools. They found both the scales satisfactory in respect of the statements in the scales. The unanimous opinion of the experts who are familiar with test construction and development of rating scales was taken as the index of validity. Intrinsic validity refers to how well the obtained scores measure the test true score components. Square root of the reliability value of the scale is its intrinsic validity. The obtained intrinsic validity of the awareness scale (0.98) and attitude scale (0.99), are high which substantiate the intrinsic validity of scales used in the study.

5.8.1.6. Locale of the Study

The Investigator has selected Puducherry Region of Union Territory of Puducherry, South India as the locale of the study. Union Territory of Puducherry comprises of four regions: i) Puducherry, ii) Karaikal, iii) Mahe and iv) Yanam. As Karaikal, Mahe and Yanam regions of this Union Territory are scattered in different neighbouring
states and they follow different educational patterns, the investigator selected Puducherry region of Union Territory of Puducherry as the locale of the study.

5.8.1.7. Sample of the Study

There are 62 higher secondary schools in Puducherry region out of which 34 are government schools and 28 are private schools. For the purpose of the study, the investigator has selected randomly 25 government schools and 17 private schools. In total 241 higher secondary teachers out of 25 government schools and 189 higher secondary teachers out of 17 private schools have been selected randomly for the study.

5.8.1.8. Data Collection

To assess the awareness of higher secondary teachers about learning difficulties in students, an awareness rating scale and to assess the attitude of the teachers towards learning disabled students an attitude scale were administered to the selected teachers handling higher secondary classes in these schools. Before administering the rating scales to the teachers, a good rapport was established with the school heads by explaining the nature and purpose of the study and its contribution to the educational practices. The researcher personally met the teachers and requested them to go through each scale with the instructions provided and, rate their awareness and attitude for each aspect of learning difficulties in students as given in the respective scales. Sufficient time was given to the teachers and no time limit was specified for answering the rating scales. The teachers were also requested to give the personal information sought in the first page of the learning difficulties awareness rating scale.
5.8.1.9. Scoring Procedure

For the purpose of statistical analysis, the collected data need to be quantified. To quantify the data, the following scoring procedure was adopted. In the awareness rating scale, against each item three responses were given. For positive statements the scoring was 3, 2 and 1. For ‘awareness to greater extent’, the score was 3, for ‘awareness to certain extent’, the score was 2 and for ‘no awareness’ the score was 1, and for negative statements the scoring was in reverse order. Similarly, to quantify the attitude scale, the scoring was 5, 4, 3, 2 and 1 for ‘strongly agree’, ‘agree’, ‘undecided’, ‘disagree’ and ‘strongly disagree’ respectively and for negative statements the scoring was in reverse order.

5.8.1.10. Statistical Techniques used in the Study

The collected data were analyzed by using appropriate statistical techniques such as Mean, Standard Deviation, Percentages, t–test, F–test, Correlation and Stepwise Multiple Regression Analysis.

To know the teachers’ awareness about different aspects of learning difficulties in students, mean and standard deviation scores of each statement / aspect of learning difficulties awareness rating scale were calculated. Based on Means, by using Mean $\pm 1$SD, the low, moderate and high awareness statements / aspects were identified. Similarly, to know the attitude of teachers towards’ learning difficulties in students Mean and SD scores on each statement / aspects of learning difficulties attitude scale were calculated. By using Mean $\pm 1$SD, the attitude of the teachers was further divided into three categories; low, moderate and high.

To study the effect of various variables such as teachers gender, age, nature of school, type of school, educational qualification, nature of school, years of experience on their awareness and attitude, mean
and standard deviation of each group in the variable were calculated. Based on mean and standard deviation, t / F – test was worked out. Whenever two groups are involved in a variable, t – test has been used to know the significant difference between these groups and when more than two groups are involved in a variable, F – test has been applied to know the significant difference among the groups.

To find out the relationship between teachers awareness and attitude, r_11 – values have been calculated by using Karl Pearson’s Product Moment Correlation. To find out the influence of independent variables (Gender, Age, Educational qualification, Training in special education, Subject of teaching, Years of experience, Location of school, Nature of school, Type of school) on the dependent variables (Awareness and Attitude), Stepwise multiple regression analysis has been worked out. This analysis helps to predict to what extent and how far the independent variables influenced the dependent variables.

5.9. Findings and Conclusions

1) The higher secondary teachers possess moderate awareness about the concept of learning difficulty, characteristics of students with learning difficulties and causes of learning difficulties. The teachers have better awareness about the instructional strategies for the students with learning difficulties and guidance and counselling. This can be ascribed to the better and higher qualifications possessed by the higher secondary school teachers. This also indicates that the higher secondary teacher has considerable knowledge about the innovative instructional strategies and guidance and counselling but they do not have adequate knowledge about the students with special needs. This shows that their base in special education / inclusive education and students with special needs should be strengthened by means of orientation programmes or in-service training so that their competence to teach LD students can be enhanced to a
considerable extent. Once their knowledge as well as awareness is strengthened, they will be able to identify the LD students at an early stage and they will be able to combat learning difficulties in a better way. It is in tune with the findings of Nagomi Ruth (2000) Sarojini (2000), Selvakani (2000), Brent et al. (2003) and Kusuma Harinath (2001).

2) The higher secondary teachers evince moderate attitude towards most of the items under the aspects / dimensions such as concept of learning difficulties, characteristics of LD students and causes of learning difficulties. This may be ascribed to their inadequate orientation or exposure with regard to special education / inclusive education and the special needs students. As for the other two aspects, instructional strategies and guidance and counselling, they have exhibited better attitude towards most of the items related to these aspects. Their attitude is high and positive with regard to motivational technique, learning strategies structural programmes, self monitoring technique, close rapport and individual attention. They have shown just moderate attitude towards repeated teaching, reciprocal teaching self instructional training and problem solving training. Their attitude is very low towards using the same method for all the students and application of multisensory approach. As for guidance and counselling, they have shown either positive attitude or moderate attitude. Their attitude is positive towards promoting self-confidence, developing good rapport, peer group guidance and parental guidance. Their attitude is moderate towards parental involvement in planning community counselling and referral to specialists. The above findings are in agreement with the findings of Harris Mary (1998), Jena (2000), Kusuma (2001), Reiter et al. (1998) and Susan Stainback and William Stainback (1982)
PART – II: Findings of Differential Analysis

3) *Gender* causes no significant difference in the awareness of higher secondary teachers about the different aspects of learning difficulties in students. It supports the findings of Sarojini (2000) and Dharmaraj (2000).

4) The variable *age* has not significantly influenced the awareness of higher secondary teachers about different aspects of learning difficulties in students. The variable ‘age’ has not significantly influenced the awareness of higher secondary teachers about the different aspects of learning difficulties in students. Even though they belong to different age groups, they evince same level of awareness but learning difficulties students. It is in agreement with the findings of Selvakani (2000), and Beth (1997).

5) *Educational qualification* does not cause significant difference in the awareness of higher secondary teachers about the different aspects of learning difficulties. It is in tune with the findings of Sarojini (2000) and Dharmaraj (2000).

6) *Training in special education* causes no significant difference in the awareness of higher secondary teachers about the different aspects of learning difficulties in students. It supports the findings of Selvakani (2000) Lombard et al. (1998) and Schumn and Vaughn (1992).

7) The variable years of experience has caused significant difference in the awareness of higher secondary teachers about various aspects of learning difficulties. The experienced teachers have better awareness about the concept, characteristics and causes learning difficulties. It is in agreement with the findings of Sarojini (2000), Guido (1990) and Praisner (2003).

8) The variable, location of school has significantly influenced the awareness of teachers with reference to the aspect causes of
learning difficulties. The teachers working in urban area have better awareness than the teachers working in rural area. On the other hand, the variable *location of the school* has no significant influence on teachers’ awareness about the other aspects of learning difficulties. It is in tune with the findings of Dharmaraj (2000) Susan Stainback and William Stainback (1982).

9) There is no significant difference among the teachers working in govt schools, aided schools and private schools in their awareness about the concept of learning difficulties, instructional strategies for students with learning difficulties and guidance and counselling whereas there is significant difference among these teachers in their awareness about characteristics of students with learning difficulties and causes of learning difficulties. With regard to these two aspects, the teachers working of in private schools have better awareness than the teachers working in govt schools and aided schools. It supports the findings of Kusuma Harinath (2001), Selvakani (2000) and Bowers et al. (1998)

10) The variable *subject of teaching* of higher secondary teachers has significantly influenced their awareness only about the aspect, guidance and counselling. Subject of teaching has had no influence on the awareness of teachers regarding other aspects.

11) There is no significant difference among the teachers working in different schools such as boys schools, girls schools and coeducational schools in their awareness about concept of learning difficulties, characteristics of students with learning difficulties, instructional strategies for students with learning difficulties, guidance and counselling whereas there is significant difference among them in their awareness about the causes of learning difficulties. As for this particular aspect, the teachers working in coeducational schools have better awareness than the teachers working in girls schools and boys schools. In the awareness about the causes of learning difficulties, the girls schools teachers stand
next to the teachers of coeducational schools with the teachers of boys schools trailing behind. It supports the findings of Jeya Prabha (2003) and Sarojini (2000).

12) Gender has not influenced the attitude of the teachers towards various aspects of learning difficulties. Only with regard to the characteristics of students with learning difficulties, there is significant difference between the men and women teachers. Women teachers evince a more favourable attitude towards the characteristics of students with learning difficulties than the men teachers. This can be attributed to the keener observation and the better concern they evince in the classroom environment. It supports the findings of Bearn et al. (1998) and Harris Mary (1998).

13) The independent variable ‘age’ has not significantly influenced the attitude of higher secondary teachers towards the various aspects of learning difficulties in students.

14) Educational qualification does not cause significant difference in the attitude of higher secondary teachers towards different aspects of learning difficulties. Despite the variation in educational qualification, they all evince similar attitude towards different aspects of learning difficulties. It is in agreement with the findings of Jena (2000) and Sarojini (2000).

15) Training in special education causes no significant difference in the attitude of higher secondary teachers towards different aspects of learning difficulties. In spite of the difference in the training, they all evince same attitude towards different aspects of learning difficulties. It lends support to the findings of Lombard, (1998), Schunm and Vaughn (1992).

16) The variable years of experience has caused no significant difference in the teachers’ attitude towards different aspects of learning difficulties. Though they significantly differ from one another in their years of experience, they have evinced same
attitude towards the different aspects of learning difficulties. The findings of this table coincide with the findings of Guido (1990) and Praisner (2003).

17) The variable, *location of school* has significantly influenced the attitude of teachers with reference to the instructional strategies for students with learning difficulties and attitude as a whole. The teachers working in urban area have better attitude than the teachers working in rural area towards the aspects, instructional strategies for students with learning difficulties and attitude as a whole. On the other hand, the variable *location of the school* has no significant influence on teachers’ attitude towards the other aspects of learning difficulties. It is in agreement with the findings of Drury (1994), Husuma Harinath (2001) and Harris Mary (1998).

18) There is significant difference among the higher secondary teachers working in government, aided and private schools in their attitude towards characteristics of students with learning difficulties, causes of learning difficulties and aspects as a whole, whereas there is no significant difference among the higher secondary teachers working in government, aided and private schools in their attitude towards others aspects of learning difficulties. The teachers working in private schools have better attitude towards students with learning difficulties than the teachers belonging to the govt and aided schools. This can be ascribed to the nature of teachers’ role in the private schools where they expect optimum output from the teachers. It coincides with the findings of Reiter et al. (1998) and Kusuma Harinath (2001).

19) The variable *subject of teaching* of higher secondary teachers has not influenced significantly their attitude towards the different aspects of students with learning difficulties. Notwithstanding the variation in the subject of teaching, the higher secondary teachers have evinced same attitude towards different aspects of learning difficulties.
20) There is significant difference among the higher secondary teachers working in boys schools, girls schools and co-educational schools in their attitude towards characteristics of students with learning difficulties, causes of learning difficulties and aspects as a while, whereas there is no significant difference among the higher secondary teachers in their attitude towards other aspects of learning difficulties. The teachers working in private schools have better attitude towards students with learning difficulties than the teachers belonging to the government and aided schools. This may be ascribed to the nature of the role the teachers play in private schools where they expect optimum output from the teachers in terms of quality and service. This findings is in agreement with the findings of Dharmaraj (2000), Sarojini (2000) and Hoffman and Barbara (1995).

PART – III: Findings of Correlation Analysis

21) There exists significant relationship between awareness and attitude in respect of the concept of learning difficulties at moderate level (0.13) and high level (0.42) only. With regard to characteristics of students with learning difficulties significant relationship prevails only at moderate level (0.17). This table further reveals that there exists no significant relationship between awareness and attitude of higher secondary teachers with regard to causes of learning difficulties and guidance and counselling. Significant relationship is inferred from the table in respect of instructional strategies for students with learning difficulties between awareness and attitude at moderate level (0.28) and high level (0.30) only. As a whole, the awareness and attitude of higher secondary teachers are significantly related at moderate (0.38) and high levels (0.34) only. To sum up no significant relationship prevails between awareness and attitude at low level in respect of all aspects of learning difficulties. This finding adds evidence to the findings of Treder and David (2000).
PART – IV: Findings of Multiple Regression Analysis

22) The independent variables such as gender, age, training in special education, years of experience, location of school, nature of school and type of school are the major predictors in influencing the awareness of higher secondary teachers about various aspects of learning difficulties while educational qualification and subject of teaching are not at all predictors. As for attitude, the independent variables such as nature of school, types of school, age and location of the school are the major predictors in influencing the attitude of higher secondary teachers towards various aspects of students with learning difficulties. On the other hand, the independent variables such as gender, educational qualification and training in special education, subject of teaching and years of experience are not at all the predictors.

5.10. Implications of the Study

A comprehensive survey can be conducted by the National Council of Education, Research and Training (NCERT), State Council of Education, Research and Training (SCERT), District Institute of Education and Training (DIET) and Central Institute of English and Foreign Languages (CIEFL) at different levels to get the wholistic picture about the prevalence of learning difficulties. Such surveys will help to plan the need based training programmes to the teachers. The teachers and parents should be enlightened about the nature of learning difficulties, causes and characteristics of children with learning difficulties, the ways and means of overcoming such difficulties in their children at early age itself. Necessary orientation may be provided to the teachers by the SCERT, DIET and SSA.

Similarly, teachers are to be sensitized to become well aware of the different aspects of learning difficulties. It is they, more than any one else, who can help to overcome the learning difficulties in students. For this purpose, teachers must be given pre-service and in-
service programmes so as to enable them to understand the aspects of learning difficulties and to enhance their competency in remediating such difficulties in students. The District Institute of Education and Training must conduct in-service and pre-service training programmes to make the teachers aware of these difficulties. Departments of Education in Universities and Colleges of Education should also plan pre-service training programmes. In the pre-service programmes, the curriculum of the teacher training certificate and B.Ed courses must be revised incorporating learning difficulties as a part of these courses.

The teachers and parents must be made aware of the variables that are predicted as potential contributors to the learning difficulties in children. Once again, here too, staff meetings and frequent teacher-parent meetings will help a lot to discuss and exchange the views about the learning problems of children by the teachers and parents.

i) The curriculum planners should keep in mind the findings of the study while developing curriculum and educational programmes for the students of higher secondary level. It is likely that every class will have some special children, so the curriculum as well as the mode of instruction should be devised so as to cater to individual differences.

ii) Without caring to the interest of special children no optimum human resource development can be achieved. As these special children constitute a considerable percentage of student population, we cannot simply ignore them. This study helps to understand about them and about their learning difficulties in a better way.

iii) This study can serve as a guideline for the teachers to understand about the problems of learning disabled children in specific areas.
iv) This study provides the teachers with better preparedness for combating learning difficulties in specific areas of language learning.

v) The study indicates what the teachers are not aware about the specific learning difficulties in students. To develop awareness in teachers about these areas, special orientation programmes can be organised by S.S.A at district / zonal level.

vi) When the teachers have awareness to some extent, the existing awareness can be further strengthened by means of either orientation programmes or in-service training.

vii) Methods of teaching special children in general education classrooms should be included in the teacher training curriculum since the teachers have to tackle the problems of special children in every general education classroom.

viii) Since the study helps the teachers to develop an insight into each area of learning difficulties, it will develop required competency on the part of the teachers and diminish wastage and stagnation in our school system considerably.

ix) Learning difficulties are more prominent at primary level. The study focuses on the pitfalls and landmarks in the areas of learning difficulties.

x) Teachers can use this study as foundation block for building their intervention strategies.

5.11. Limitations of the Study

The following are the limitations of the study

1. The study is confined to the teachers working in government, government aided and private higher secondary schools teaching the students in XIth and XIIth standards.
2. The sample consists of 430 teachers working in Puducherry Region of Union Territory of Puducherry only.

3. The assessment of higher secondary teachers’ awareness is made on the basis of teachers’ self ratings only.

4. Similarly, the attitude of higher secondary teachers’ is assessed only on the basis of teachers’ self ratings.

5. Only the aspects such as concept of learning difficulties, characteristics of students with learning difficulties, causes of learning difficulties, Instructional strategies for students with learning difficulties and guidance and counseling to the parents and students with learning difficulties are taken into account to study the awareness and attitude of higher secondary teachers towards learning difficulties among students.

5.12. Suggestions for Further Research

i) Similar studies can be conducted to assess the awareness of teachers about learning difficulties taking the sample in the entire Union Territory of Puducherry.

ii) Similar studies can be undertaken to assess the awareness of teachers about specific learning difficulties at primary and secondary levels of different states and Union territories.

iii) Indepth studies can be taken up to assess the awareness of teachers about learning difficulties of children in acquiring specific skills in listening, speaking, reading or writing in language learning.

iv) A comparative study can be taken up involving reading difficulties and speaking difficulties of learning disabled children.
v) Experimental studies can be taken up applying specific modes of instruction to learning disabled children and efficacy of the applied strategy can also be assessed.

vi) A survey study can be undertaken to assess the prevalence of learning difficulties at other levels of education i.e. middle school and high school level.

vii) Similar study can be attempted to assess the attitude of the middle school teachers or high school teachers towards LD children in their classroom.

viii) Case studies can be undertaken to assess the progressive or retrogressive nature of learning difficulties as the educational level increases.

ix) The present study may be replicated by using different types of tools.