

# **A CASE STUDY ON PRIMARY SCHOOL STUDENTS WITH LEARNING DISABILITY**

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## **DECLARATION**

I, Murshid M, do hereby declare that this dissertation “**A CASE STUDY ON PRIMARY SCHOOL STUDENTS WITH LEARNING DISABILITY**” has not been submitted by me for the award of any Degree, Diploma, Title or Recognition before.

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## **CERTIFICATE**

I, **Dr. K. VIJAYAKUMARI**, do hereby certify that this dissertation entitled “**A CASE STUDY ON PRIMARY SCHOOL STUDENTS WITH LEARNING DISABILITY**” is a record of bonafide study and research carried out by **MURSHID M**, under my supervision and guidance. The report has not been submitted by him for the award of any Degree, Diploma, Title or Recognition before.

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*Farook Training College  
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*Everybody is a genius, but if you judge a fish by its ability to climb a tree, it will spend its whole life believing that it is stupid. -*

Albert Einstein

Over the past decades, both researchers and practicing educators have focused with increasing urgency on the goal of teaching all children in a classroom. There may be students with simple or complex (single or multiple) learning styles in classrooms with varying levels of ability. It is a real challenge to consider these students together with normal students, but in the inclusive educational practice, a teacher is expected to know the needs and capabilities of all children. Inclusive education is an education system, in which children with disabilities and children without disabilities learn together in the same classroom. This system demands flexible strategies to meet the needs of disabled children. Inclusion is the right of all individuals to get the opportunity to be appropriately educated in a regular classroom and provides "school for all".

Learning disability (LD) is a pedagogical term- an umbrella label- that means disturbances in the acquisition of learning skills including delays, deviations, and performance discrepancies in the basic academic subjects like arithmetic, reading, writing, spelling and speech. LD is a group of neurological or brain-based problems that affect one or more ways that a person takes in, stores or uses information (A Handbook on Learning disabilities, 2009). Sarva Shiksha Abhiyan (SSA) has included LD in their categorization of children with special needs. As per the definition given by SSA, children with special educational needs are those

children who are challenged with various problems such as that of vision, hearing, movement, learning, cerebral palsy or mental retardation" (SSA, 2003).

LD is a neurological disorder in processing information. Specific neuro-developmental disorders that are usually exhibited during school-age may not be recognized until adulthood. It affects how an individual receives and processes information and may interfere with the learning of basic skills like reading, writing, and arithmetic. If not attended, learning disabilities obstruct higher-order skills such as organization, abstract thinking, critical and logical reasoning, time calculation, memory, attention, etc.

The RCI book on Learning Disabilities edited by Adam (n.d) includes the definition of Learning Disability by significant agencies like American Psychiatric association and GEON. According to Diagnostic and Statistical Manual – IV (DSM-IV) Learning Disorders are diagnosed when the individual's achievement on individually administered, standardized tests in reading, mathematics or written expression is substantially below that expected for age, schooling and level of intelligence. The learning problems significantly interfere with academic achievement or activities of daily living. The definition by International Statistical Classification of Diseases and Health Related Problems (ICD DSR) is as a significant deficit in learning due to a person's inability to interpret what is seen and heard, or to link information from different parts of the brain (Adam, n.d).

Mainly three types of learning disabilities are identified namely dyslexia, dysgraphia, and dyscalculia. Dyslexia refers to the difficulty with reading. People with dyslexia have difficulty in connecting letters they see with the sound they

make. Dysgraphia is a term used to describe difficulties with putting one's thoughts on paper. Problems with writing include difficulties with spelling, grammar, punctuation, and handwriting. Dyscalculia refers to the difficulties in learning number-related concepts or using the symbols and functions to perform math calculations. Problems with arithmetic can include difficulties with number sense, memorizing math facts, calculations, reasoning, problem-solving, etc.

Students with learning disabilities may be diagnosed at any age, but most are found in early primary school grades. Like any other disability, early diagnosis and timely interventions reduce the negative effects of learning disabilities on an individual's life. Therefore it must be properly treated to develop their abilities and be capable to lead a successful life. Unfortunately, most of these children are never identified as learning disabled. These children are usually labeled as slow, backward, and underachievers mainly due to the lack of awareness among teachers, parents, and school authorities.

LD cannot be cured or fixed at any stage, but it is a lifelong concern. That is, it affects an individual's life beyond his/her academic life. It makes an impact on the relationship with family, friends, and the workplace. If properly cared for, children with learning disabilities can perform well in their academics and can be successful in their future careers

The last decade of the 20th Century saw the enactment of three legislations in India namely The Persons with Disabilities Act, 1995; The Rehabilitation Council of India Act, 1992; and The National Trust Act, 1999 for the rehabilitation and welfare of people with disabilities. There have been various initiatives in the field of education such as District Primary Education Programme (DPEP), National Policy

of Education, Total Literacy Campaign, and establishment of DIETs, but none of these initiatives address the problems of LD and its related issues. In continuation to DPEP programme (1993-94) for achieving the objective of universal primary education, the Government of India has launched Sarva Shiksha Abhiyan as an intervention programme which has been operational since 2000-2001. Two major principles that guide the changes in elementary education are equity and access. Equity does not restrict to equal opportunity, but it includes creation of conditions in which the disadvantaged sections of the society – children of SC, ST, Muslim minority, landless agricultural workers and children with special needs, etc. – can avail of the opportunity. By accessibility, together with the concern of distance, an understanding of educational needs and predicament of the traditionally excluded categories – the SC, ST and other sections of the most disadvantaged groups, the Muslim minority, girls in general, and children with special needs is also to be ensured. The objective of UEE cannot be achieved without including children with special needs including LD under the ambit of elementary education. The National Curriculum Framework, 2005 also recommends an inclusive curriculum that ensures full participation of all children including first-generation learners, learning disabled, slow learners, and children from SC and ST (NCERT, 2005).

Children and youth from all walks of life have endured lifelong learning difficulties. Many of the most respected people in the world were identified as having some sort of learning disability, to name some as Thomas Edison, George Patton, Woodrow Wilson, and Albert Einstein. These eminent persons were hopefully able to find appropriate modes of learning and then they resolved their initial disappointment successfully.

### **Need and significance**

UNESCO (2019) reports that 75% of five-year-olds with disabilities and one-fourth between 5-19 years do not go to any educational Institutions (IndiaToday, July, 4, 2019). The Institute for Communicative and Cognitive Neurosciences (ICCONS), Kerala, has been conducting research programs in child's 162 language disorders and developing research and rehabilitation programs for learning disabilities. Screening for LDs for Classes I to VII in schools with follow up assessments by experts in 10 panchayats in Kerala revealed that 16% of these school children have a learning disability (Suresh, 1998, as cited in Adam, n.d.).

Sree Chithira Thirunal Institute of Medical Sciences and Technology, Kerala in 1997 reported that nearly 10% of the childhood population has developmental language disorders of one type or the other and 8-10% of the school population has a learning disability of one form or the other. In India, there are a large number of students with LDs, and most of them go undetected. The recognition and identification of the students with LDs become very difficult in India because of its diverse socio-cultural backgrounds and different medium of instruction from state to state. The guidelines for LD certification and assessment also vary from state to state. Therefore, a National Policy that implements uniform guidelines was recommended by Vellaiappan (2017).

Children with learning disabilities lead to poor academic performance which, in terms of the child's job opportunities, causes difficulties in later life. In a child with average intelligence, the existence of learning disorders causes psychological problems for the student as a sense of guilt and disappointment of not being able to

do well in academic activities. Students with disabilities, who are unfortunately neglected in normal classrooms, need special training to improve their skills.

Early intervention pre-supposes early identification. At present, there is no universally standardized screening procedure to guide referrals from schools. The spectrum of difficulties and their severity makes the diagnosis of LD extremely difficult especially when they are confounded by environmental, cultural, and economic disadvantages. In India these factors namely, the poor exposure of many of these children to education, knowledge, and language makes diagnosis even more problematic. Developed countries today face some of the same difficulties due to a large number of children from immigrant populations; the diagnosis of LD is certainly not easy.

Before a specialized evaluation of a student is conducted, pre-referral discussions with teachers/schools, parents, and children might be made are important. The child must be assessed in all areas related to the suspected disability such as health, vision, hearing, social and emotional status, general intelligence, academic performance, communicative status, and motor abilities. (National Information Centre for Children and Youth with Disabilities, 2000).

There is no cure for LD, either medical or through other measures. However, the difficulties due to LD in the areas of reading, spelling, expression, etc., can be managed effectively with timely and appropriate intervention. Processing information in the brain is a multi-path process; hence, strengthening alternate modes of processing, building language, and cognition are good compensatory strategies. All learning takes place through various senses. Multi-Sensory Approach like tactile approach (feeling, touching, and mouthing), kinesthetic activities

(activities involving movement) can be used for learning. A child with LD may experience difficulties with either the visual or auditory or both of these modes. Using a multi-sensory teaching approach means helping a child to learn through more than one of the senses is more effective for LD.

In spite of many researches and implementation of educational programmes, the use of telling and blackboard method of teaching is prevalent in our classrooms. This poses difficulties for children with auditory or/and visual processing problems. For them, activities involving self, drama, music, pictorials, and the use of audio-visual aids are essential. Teachers can use multi-media presentations in performing their tasks. Differences in teaching methods, the use of multi-sensory tools, and a focus on learning make a world of difference to the learning of children with LD.

The development of a holistic and progressive education system is the first step to ensuring the learning needs of all children are addressed. This will create a warm environment for all children, ensure positive learning, achievement, and success irrespective of the child's academic potential. The most recent scientific discoveries about learning disabilities have exciting implications for helping children, but they have not been quickly translated into appropriate interventions for students with learning disabilities.

Early intervention helps to improve capabilities and capacities of learning disabled children. Due to the lack of special training programmes during B.Ed. and D.Ed. courses, a teacher fails to treat them properly in their professional life. Case studies on children with learning disability may throw light to the features of special cases and the contextual information about the learning disability. It is expected that

results of such case studies may contribute to curriculum planning of teacher preparation courses both pre-service and in-service.

### **Statement of the problem**

In most populous countries like India, one cannot just ignore a large mass of disabled people. According to the statistics, one tenth of the entire population in India suffers from one kind or the other of a disabling condition. The learning difficulties are high in all disability categories. Even though the introduction of the term 'Learning Disability' gave new insights into the development of such children, the research in this field remains few in number. This group needs immediate attention and care in order to have education and to lead a better life like the others. We can give necessary help for such children only when we identify such child and understood the exact problem of the child as soon as possible. It is important to analyse the intellectual, personal and social aspects of children with learning disabilities. Case study method is a most appropriate method to identify and understand the problems of children with learning disability since it facilitates detailed and in depth study of the case. The present study is entitled as "**A CASE STUDY ON PRIMARY SCHOOL STUDENTS WITH LEARNING DISABILITY**"

### **Definition of key terms**

The key terms in the statement of the problem are operationally defined in order to get a clear picture.



## **Case Study**

A case study is an empirical enquiry that investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident (Yin, 2009).

In the present study, a detailed, in-depth analysis of five primary school children with LD stands for case study which uses Testing, Interview, Observation and Document analysis for collection of data.

## **Primary School Children with Learning Disability**

Primary school children with learning disability stands for children studying in primary schools of Kerala who are identified as having single or multiple learning disabilities like Dyslexia, Dysgraphia, and Dyscalculia.

### **Research questions**

1. What is the intellectual ability of the children with learning disability?
  - a) What is the nature of learning disability of the case?
  - b) Whether the child with learning disability has normal level of intelligence measured using Raven's coloured progressive matrices and MISIC (Malin's Intelligence Scale for Indian Children).
2. What is the personal and familial background of the children with learning disability?
  - a) What is the socio economic status of the family of the child with learning disability?

- b) Whether the child with learning disability has a normal developmental history?
3. How do the children with learning disability perceive themselves and social support they receive?
- a) How did the child with learning disability perceive himself?
  - b) How does the child with learning disability perceive classroom, teachers and the subject?
  - c) How does the child with learning disability perform in various subject areas?
  - d) How does the child with learning disability perceive the social support he/she receives?

### **Objectives of the study**

The following are the objectives of the study.

1. To analyse the intellectual ability of the selected children with Learning Disability.
2. To analyse the personal and familial background of the selected children with Learning Disability
3. To know the perception of the select cases about themselves and the social support they receive.

## **Methodology**

### **Method**

The present study is a case study on five primary school students with learning disability using multi model approach. Data was collected through testing, interview, observation and document analysis.

### **Sample**

The population of the study consisted of children studying in primary schools of Kerala who are identified as having single or multiple learning disabilities like Dyslexia, Dysgraphia, and Dyscalculia by an authorised testing agency. The sample is selected from different primary schools of Malappuram district by convenient sampling technique.

### **Techniques and Instruments used**

1. Non-participant observation of the children with an observation schedule to observe the child's behaviour and approaches inside the classroom, outside the classroom with peers and teachers.
2. Scheduled interview with parents, teachers and children in order to collect personal details, academic details, health related information, details during the pregnancy period of the mother, family details etc of the participants.
3. Document analysis was used to get more details about the academic performance and progress of the cases.

4. Raven's Coloured Progressive Matrices was used to get intelligence score of the cases.
5. Malin's intelligence scale for Indian children (MISIC) to assess the intelligence of the cases (secondary data)

### **Scope of the study**

The present study is a case study of five children of primary schools in Kerala who are identified as having learning disabilities like Dyslexia/ Dysgraphia and/ or Dyscalculia by an authorized testing agency. The participants of the study are selected from different primary schools of Malappuram district by convenient sampling technique. Non participant observation, interview with case, parents and teachers, document analysis, Raven's Coloured Progressive Matrices and Malin's Intelligence Scale for Indian Children were used to collect information about the participants of the present study. In - depth and detailed study of the cases facilitates the investigator to gather almost all information about the cases including personal details, academic details and progress, non-academic aspects, family details, health related information etc.

Even though the investigator had conducted this study in an accurate way and also giving due care, there are some limitations crept in to the study. In spite of all the limitations, the investigator hopes that the result of the study will be very helpful to teachers, parents and educationists to realize the problems of children with learning disability and help them to identify children with learning disabilities. Thus

they can help such children and provide necessary caring and treatment so that the children can lead a beautiful and successful life.

### **Limitations of the study**

Though much care was taken to make the study more accurate and comprehensive, some drawbacks were intruded in the study. Some noticed drawbacks are listed below.

- The study is confined to Malappuram district only. This being a case study, the findings are not supposed to be generalised, but the investigator has confidence in the implications of the findings in educational field.
- The cases included in the study are male students with single learning disability.
- Details on the cases are not complete, many aspects like emotional, social and cognitive abilities are to be explored in detail, but time constraints and lack of resources made the investigator confined to the Intelligence, SES, personal development, and perception of social support of the select cases.

### **Organization of the report**

The report has been presented in five chapters.

**Chapter – I** of the report contains a brief introduction to the problem, need and significance of the study, statement of the problem, definition of key terms, research questions, objectives, methodology in brief and scope and limitations of the study.

**Chapter – II** describes the theoretical overview of the problem and review of related literature.

**Chapter – III** is the methodology of the study which describes the details of the method used, selection of sample, tools used, data collection procedure and analysis.

**Chapter – IV** includes the analysis of data collected, discussion of result and conclusion.

**Chapter – V** includes summary of the study, major findings, conclusion, educational implications of the study and suggestions for further research in this area.

## **REVIEW RELATED LITERATURE**

Review of related literature is the written summary of the articles, books and other documents that describe the previous works done in the area of interest of the researcher. It is an important aspect of an investigation.

In the present chapter the theoretical overview of learning disability and Case study as a method of research as well as the studies in the area of learning disability and research works that followed case study method are discussed.

### **Theoretical Overview**

#### **Learning disability**

A child with learning disability has difficulty in learning that involves understanding or using spoken or written language and the difficulty can appear in listening, reading, writing, speaking, reasoning and doing Mathematics. To be classified as a learning disability, the learning problem is not primarily the result of visual, hearing, or motor disabilities, mental retardation, emotional disorders due to environmental, cultural or economic disadvantages (U.S government, 2004)

Learning disabilities are neuro-biologically based processing problems. These problems can interfere with learning basic skills such as reading, writing and arithmetic. This processing problem can also interfere with higher order skills such as organisation, abstract thinking, critical and logical reasoning, time calculation, memory, attention, etc...The seriousness that the learning disabilities would make is that it affects an individual's life beyond his/her academic life. A learning disabled

individual faces many problems throughout his entire life. It makes impact on relationship with family, friends and work place.

Most learning disabilities are life - long. Children with a learning disability are likely to show poor academic performance, high dropout rates and poor employment and post-secondary education records (Berninger&Winn,2006). Learning disabilities vary from person to person. One person with learning disabilities may not have the same kind of learning problems as another person with learning disabilities. One person may have trouble with reading and writing. Another person with learning disabilities may have problems with understanding math. Still another person may have trouble in each of these areas, as well as with understanding what people are saying.

Learning disabled children suffer from serious learning problems or disorders for a number of reasons. Their problems and disorders are usually manifested by significant difficulties in the acquisition and use of language (Listening speaking reading writing etc.) reasoning or Mathematical ability or of social skills. Children with learning disabilities are so not because of dumbness or laziness have average or above average Intelligence and the problems is with a different area of processing information by the brain.

There is no “cure” for learning disabilities. They are life-long. However children with learning disabilities can be high achievers and can be taught ways to get around the learning disability. With the right help, children with learning disabilities can and do learn successfully. They can succeed in school and go on to successful often distinguished careers later in life.



Parents can help children with learning disabilities achieve such success by encouraging their strength, knowing their weakness, understanding the educational system, working with professionals and learning about strategies for dealing with specific difficulties.

### **Types of learning disabilities**

Types of learning disabilities are Dyslexia, Dysgraphia, Dyscalculia and Dyspraxia. Each of the learning disabilities are explained below.

#### **Dyslexia**

The word dyslexia comes from the Greek language and means poor language. The word dyslexia is very broad term defining a learning disability that impairs a person's fluency or comprehension accuracy is being able to read and which can manifest itself as a difficulty with phonological awareness, phonological decoding, orthographic coding, auditory short time memory or rapid naming.

Dyslexia is distinct from reading difficulties resulting from other causes, such as non-neurological deficiency with vision or hearing, or from poor or inadequate reading instruction.

#### **Dyspraxia**

A person with dyspraxia has problems with movement and coordination. It is also known as motor learning disability, developmental coordination disorder (DCD), perceptuo-motor dysfunction, and motor learning difficulties. Somebody with dyspraxia finds it hard to carry out smooth and coordinated movements.

Dyslexia often comes with the language problems and sometimes a degree of difficulty with perception and thought. Dyspraxia does not affect a person's intelligence but it can use learning difficulties especially for children.

### **Dysgraphia**

Dysgraphia is a deficiency in the ability to write, primarily in terms of handwriting, and in terms of coherence. It occurs regardless of the ability to read and is not due to intellectual impairment. Dysgraphia is transcription disability, meaning that is a writing disorder associated with impaired handwriting, orthographic coding and finger sequencing. It often overlaps with other learning disabilities such as speech impairment, attention deficit disorder, or developmental coordination disorder. In the Diagnostic and statistical manual of mental disorder( DSM-IV), dysgraphia is characterized as a learning disability in the category of written expression when one's writing skills are below those expected given a person's age measured through intelligence and age appropriate education.

### **Dyscalculia (Math disability)**

Dyscalculia is a specific learning disability involving innate difficulty in learning or comprehending arithmetic. It is akin to dyslexia and includes difficulty in understanding numbers, learning how to manipulate numbers, learning maths facts, and a number of other related symptoms. Math difficulties can also occur as the result of some types of brain injury, in which case the proper term is acalculia, to distinguish it from dyscalculia which is of innate, genetic or development origin.

## **Conclusion**

Learning disabilities are neuro-biologically based processing problems. The child with learning disability has difficulty in learning that involves understanding or using spoken or written language and the difficulty can appear in reading, writing (dysgraphia), speaking (dyslexia), movement (dyspraxia), reasoning and doing Mathematics (dyscalculia).

## **Case study**

Case study as a research method is originated in clinical medicine to study the patients' personal history, but in psychology it mainly focused on studying a particular individual. Later case study became a well-accepted research method in social science also. Now it is a popular component of qualitative research used in a variety of disciplines to reveal trends and issues that are not exposed in prior researches and to new, important implications for practice.

The English social philosopher, Spencer, was among the first to use case materials in his comparative studies of different cultures. Healy resorted to the case study method in study of Juvenile delinquency. Healy realised that the problem of Juvenile delinquency was too complex to be understood simply on the basis of available statistical data. Hence he declared himself in favour of case study method which afforded deeper and round understanding of the phenomenon.

Case study is an in depth comprehensive study of a person, a social group, an episode, a process, a situation, a programme, a community, an institution, or any other social unit. It is one of the most popular methods and it uses both quantitative

and qualitative data collected through a wide variety of methods like interview, observation, and survey to understand the life cycle of the unit under study or interaction between factors that explain the present status of the development over a period of time. It is a research strategy, or an empirical enquiry that investigates a contemporary phenomenon by using multiple sources of evidence. A Case can be simple and specific, but it must be a bounded unit an entity in itself.

Some writers like Bell (1993) and Blaxter (1996) have suggested that the case studies are suitable for single person research on a limited budget and that the study of one case provides manageable opportunity for the researcher to study one aspect of the problem in some depth within limited time. But the scope of case studies goes beyond it and is used for various purposes- descriptive, exploratory and explanatory research- and also to generate theory (Yin, 1989 & Gummesson, 1991).

### **Definitions of case study**

Case study is defined in many ways by many researchers. There is no unique definition for case study research

Case study is an empirical enquiry that investigates a contemporary phenomenon in-depth and within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident (Yin, 2009).

A Case study can be defined as an intensive study about a person, a group and people or a unit, which is assumed to generalize over several units (Gustafsson, 2017).

Case study, as defined by Woods and Calanzaro (1980) is an intensive, systematic investigation of a single individual, group, community or some other unit in which the researcher examines in-depth data relating to several variables.

### **Characteristics of case study**

The following are characteristics of case study.

- It studies whole units in their totality and not some selected aspects or variables of these units.
- It employs several methods in data collection to prevent errors and distortion.
- It often studies a single unit: one unit is one study.
- It perceives the respondent as a knowledgeable person, not just as a source of data.
- It studies a typical case.

### **Principles of case study**

The principles of case study are,

- **Use multiple sources:** Use of one source of data collection does not give adequate evidence for generalization. But getting information from several sources (like interviewing, observing, analyzing documents) is regarded as the major strength of the case study approach, because it also contributes to improving the reliability and validity of the findings.

- **Maintain a chain of evidence:** The evidence from which the conclusions are drawn in the case study has not only to be stated and specific cases cited like criminological investigation in a crime case in the court but it is also to be preserved for some time so that the evaluators should be able to verify the source and evidence.
- **Record data:** The data may be recorded either in the form of sketchy notes in observation and interviews or it may be tape- recorded in minute details. If a few notes are taken at the time of interview/ observation, full notes may be written later or as soon as possible.

### **Purposes of case study**

According to Burns (2000) purposes of case study are,

- To use it as a preliminary to major investigation as it may bring to light variables, processes and relationships that deserve more intensive investigation. In this sense, it may even be a source of hypotheses for further research.
- To probe the phenomenon deeply and analyse it intensively with a view to establishing generalization about the wider population to which the unit belongs.
- To get anecdotal evidence that illustrates more general findings.

- To refute a universal generalization. A single case can represent a significant contribution to theory building and assist in focusing the direction of future investigation in the area.
- To use it as a unique, typical and an interesting case in its own right.

**The purpose of case study can be listed as,**

- To get intimate and detailed information about the structure, process and complexity of the research object.
- To formulate hypotheses.
- To conceptualize.
- To operationalize variables.
- To expand quantitative findings.
- To test the feasibility of the quantitative study (Ahuja, 2010)

**Types of case study**

Burns (2000) has stated six types of case studies:

**1. Historical case studies**

These studies trace the development of an organization/ system over time. The study of an adult criminal right from his childhood through adolescence and youth is an example of this type of case study. This type depends more on interviews, recording and documents.

## **2. Observational case studies**

An observational case study is a study of a real-world case without performing an intervention. Measurement may influence the measured phenomena, but as in all forms of research, the researcher tries to restrict this to a minimum.

## **3. Oral history case studies**

These are usually first person narratives that the researcher collects using extensive interviewing of a single individual. For example, the case of a drug addict or an alcoholic, or a prostitute or a retired person who fails to adjust himself in son's family. The use of this approach depends more on the nature and cooperation of the respondent.

## **4. Situational case studies**

This form studies particular events. The views of all participants in the event are sought. For example, a communal riot: how it started with conflict between two persons of two religious groups, how each person sought support of persons of his own religion present at the spot, how police was informed, how police arrested persons of one particular religious group, how power elite interfered and pressurized the police department, how did public and the media react, and so on. Pulling all these views together, a depth is provided that contributes significantly to the understanding of the event.



## **5. Clinical case studies**

This approach aims at understanding in depth a particular individual such as a patient in the hospital, a prisoner in the jail, a women in a rescue home, a problem child in a school, etc. these studies involve detailed interviews, observation, going through records and reports, and so on.

## **6. Multi-model approach**

It is a collection of case studies or a form of replication, i.e., multiple experiments. For example, one can take three case studies and analyse them on replication logic. This logic is that each case will either produce contrary results or similar results. The outcome will demonstrate either support for the initial propositions or a need to revise and reset with another set of cases. The advantage of multi- case design is that the evidence can be more compelling. However, this approach requires more time and effort.

Eckstein (1975) has classified case studies into five groups on the basis of their different uses:

### **1. Configurative / Ideographic case study**

This case study uses descriptions to provide understanding. The configurative element provides the overall outline of the unit under investigation. The ideographic element either allows facts to speak for themselves or for intuitive interpretation. The intensity of such studies claims validity. The major weakness of this type of case study is that the understanding produced by such study cannot be used to generate theory. In fact, they are not designed for this purpose.

**2. Disciplined- comparative case study**

In this type, each case is viewed in the context of an established or a provisional theory. Ideally, the findings of a particular case study should be able to be deducted from such a theory or could be used to challenge it. For example, the case study of a criminal to interpret on the basis of Sutherland's theory of causes of crime, that the specific criminal became a criminal by associating with criminals and learning from them the methods of committing crime.

**3. Heuristic case study**

This type of case study stimulates theoretical thinking. Such studies, unlike configurative- ideographic case studies, are used for theory building and therefore are less concerned with overall descriptions of individuals, events, etc. Rather these are concerned with generalizable relations. But heuristic case study does not guarantee a theoretical outcome.

**4. Plausibility probes case study**

This type of case study is used in the intermediate stage between the development of a theory and the testing of that theory. This case study attempts to establish whether a theoretical construct is worth considering at all.

**5. Crucial case study**

This case study is designed to challenge an existing theory.

### **Functions of case study**

- The case study method describes a case in terms of its peculiarities. It gives us an insight into the typical for extreme cases whose unique features are not reflected by the usual statistical method
- Case study helps to secure a wealth of information about the unit of study, which may provide clues and ideas for further research. It provides an opportunity for the intensive analysis of many specific details that are overlooked in other methods.
- It examines complex factors involved in a given situation so as to identify causal factors operating in it.
- A case study aims at studying everything about something rather than something about everything as in the case of statistical method.
- In quantitative research, the individual score does not have any importance, but in a case study, group of data is not considered, here individual is the major focus.

### **Sources of data collection for case studies**

Two main sources of primary data collection are interview and observation, while the secondary data are collected through a variety of sources like reports, records, newspapers, magazines, books, files, diaries, etc. The secondary sources may not be accurate or may be biased. But they specify events and issues in greater detail than interviews can. Interviews may be structured or unstructured. Most

commonly, it is the unstructured interview which is used by the investigators. The questions are usually open-ended with a conversational tone. However, at times, the structured interview is also used as part of a case study.

The observation method used could either be participant or non-participant. Both these methods give opportunity to the investigator to perceive reality from the viewpoint of an outsider.

### **Advantages of case study**

- Case study is flexible with respect to data collection methods. All methods of data collection are useful to case studies.
- A case study can extend virtually to any dimension of the topic studied all aspects may be studied or specific aspects may be emphasized.
- It makes in-depth study possible.
- It can be conducted in practically any kind of social setting.
- Case studies are inexpensive.
- It provides a critical test of a theory to corroborate, challenge or extend it.
- It helps in studying a unique case which is useful not only in clinical psychology but also in sociology for the study of individual deviant groups, problem individuals and so on.

### **Disadvantages of case study**

- The most prominent disadvantage of case studies is their limited generalisability. As case studies of stray cases, they are not sufficient for making generalization to larger social aggregates.
- Case studies are generally more time consuming than surveys.
- Case study method is inadequate for an analysis of macro- problems.
- The danger of investigator's over confidence is more in a case study. This leads to various biases such as errors of perception, judgement and over-emphasis of unusual events, unwarranted exploration, and ad hoc theorizing and sweeping generalisations.

### **Steps in case study**

Generating and collecting data for a case study requires detailed planning and preparation in order to be successful. It includes how to negotiate access to a case study site, how to prepare for a case study, how to conduct case study research, and how to process the findings from case studies.

- **Negotiating access**

The first step to developing a case study is to determine how to get access to a particular case study site. If the unit for the case study is a person, that person will need to confirm that they agree to the interaction, sometimes repeatedly for a period of time if the research design requires. If the research site is a larger unit, such as a

department or a company, permission is usually obtained through a contact inside that unit.

- **Preparing for the research site**

Once access to the research site has been negotiated, the plan for the methods to be used must be prepared. In a case study, almost any combination of qualitative and quantitative methods can be used to obtain the data from the research site. It is important to consider the implications of the methods that are to be used, and how to prepare for them.

- **Conducting case study research**

After preparing sufficiently for the research, the next step is to conduct the research. Throughout the study, the researcher must ensure that information about the study is available for people who ask for it. Some people may be nervous about participating in the research, and a clear, one-page description of what the research entails and how the case study site fits into this will put many people at ease. Given that case study research is generally conducted over a period of time, it is important to keep track of the research methods used over the course of the study. For example, if the researcher is conducting interviews, they must keep detailed record of the interview. While this may seem obvious at the time, important details may be forgotten in the time between data collection and returning to the research institution to analyse and write up the findings.

- **Processing the findings**

Collecting data at the case study site is only the first step of data preparation process. In many cases, there are other steps that must be taken before one can begin analyzing the data. If the interviews were recorded, one will usually want to transcribe them before beginning the analysis. Data processing can often take a substantial amount of time, and it is important not to forget about this crucial step when planning the research.

- **Analysis of data**

A case study is not a short cut to reduce the time needed for analysis. It is not sufficient to spend time immersed in the case study site, return to one's desk, and simply allow the experiences to flow onto the pages as prose, as has been suggested by some researchers who have used case study to poor effect in their work.

- **Choosing an analytical approach**

The type of research method used will often dictate the analytical approach. Time is a major factor for many researchers, and if there is little time to complete the analysis, a method that requires less detail should be chosen. In interviewing, for example, some researchers use field notes taken during the interviews as their primary source of data, while others record their interviews and use qualitative software to analyse the transcripts of these interviews.

- **Conducting the analysis**

Once the analytical approach has been selected, the analysis should proceed in a systematic way. For case study research to be effective, it must use a logical process of analysis that accounts for bias on the part of the researcher. Someone reading the research paper should be able to follow the analysis and understand how the conclusions were reached. Therefore, detailed records of the steps that were followed when conducting the analysis should be kept. If not, the write-up may be hampered by an inability to remember what was done, or to explain why it was done. For multiple case studies, it is also important to conduct the same analysis on data from the different cases.

- **Writing up the findings**

Researchers may choose to write up their findings after they have finished their analysis, or as they are undertaking their analysis. While the typical research process recommends a linear progression through analysis to writing up findings, there are both advantages and disadvantages to writing up simultaneously with the analysis.

For reporting the findings, thick description method suggested by Geertz (1973), which involves the use of many quotes from interviewees or field notes to allow the study to ‘speak for itself’ or present the findings in tabular or statistical form, with more detail about how the findings are interpreted can be used.

Another consideration in writing up case study research is how to incorporate theory. Creswell (1998) observes that case studies may or may not use



theories, using Stake's (1995) description of his experiences in a school as an example of a narrative and non- theoretical example of case study. For cases that do not use theoretical models, these can come before or after the analysis, with the case alternately being informed by theory or informing theory development.

## **Conclusion**

Case studies are in-depth investigations of a single person, group, event or community. Typically, data are gathered from a variety of sources and by using several different methods. Case study method is a very popular form of qualitative analysis and involves a careful and complete observation of a social unit, be that unit a person, a family, an institution, a cultural group or even the entire community. It is a method of study in depth rather than breadth. The case study places more emphasis on the full analysis of a limited number of events or conditions and their interrelations.

## **Review of related Studies**

### **Studies related to learning disabilities**

Phillips (1990) in a study titled as a self-advocacy plan for high school students with learning disabilities: A comparative case study analysis of students', teachers', and parents' perceptions of program effects examined immediate perceived effects of a self-advocacy plan for students with learning disabilities (LD) in a 4-year comprehensive high school. The study's design was based on information-processing theory and qualitative research techniques, such as participant/ observation and interviews. The sample of this study consisted of 15 ninth- and

tenth-grade students with LD, their parents, and their resource teachers. Participants responded to standardized open-ended interview questions upon completing the first step of the Self-Advocacy Plan. The results of the study suggested that the Self-Advocacy Plan is an effective program increasing students' awareness of the vocational and academic services they qualify for, clarifying their perceptions of their roles as learners and individuals with LD, increasing their understanding of LD as a condition that has certain general characteristics, and developing their awareness of career and educational opportunities.

Conti (2000) had conducted a study on Motivation among students with learning disabilities. The purpose of this study was to examine whether intrinsic motivation is a major factor in explaining academic performance deficits in children with learning disabilities. The sample of the study consisted of 34 students with learning disabilities and 36 students without learning disabilities from Grades 4 to 6 from a suburban, middle-class school district located in South eastern New Jersey. The students were given a 30-item questionnaire, "The Scale of Intrinsic vs. Extrinsic Orientation in the Classroom", which measured the students' intrinsic and extrinsic motivational levels. The results derived from a t-Test for independent samples did not show a significant correlation between motivation orientations. Although students with learning disabilities proved to be less intrinsically motivated on the criteria subscale, they scored similarly to their non-handicapped peers on the challenge, curiosity, mastery, and judgment subscales.

Robinson, Menchetti and Torgesen (2002) had conducted a study, "Toward a two-factor theory of one type of mathematics disabilities". They examined about

number facts performance in a sample consisting of 318 children with learning disabilities of third grade in six public schools who were divided into three groups – group of students with mathematics disabilities alone, group of students with concomitant mathematics and reading disabilities, and a contrast group and the findings revealed that children with both phonological processing and number sense weaknesses had greater difficulty in mastering the number facts and that students with mathematics difficulties alone were able to use their phonological processing skills to compensate for observed weakness in number sense.

Jaimon (2004) had conducted a study on Effects of deficits in scientific skills on achievement in science of the learning disabled at the primary school level. The study was conducted on a sample of 614 standard IV children (325 boys and 289 girls) selected from various schools of Alappuzha and Kottayam district. Tools Used for data collection were Science Process Skill Test, Test of Achievement in Science, Diagnostic Test to identify the disorders of Reading and Writing, Diagnostic Test to identify Mathematical Disabilities and Raven's Coloured Progressive Matrices Sets A, AB, B. It is evident from the study that about 20 per cent of the population are learning disabled. The study also found that there is significant difference between learning disabled children (LD) and non-disabled (ND) children with respect to their achievement in Malayalam, mathematics, science process skills, intelligence and achievement in science which shows the superiority of nondisabled children. It was also found from the study that there is a significant positive correlation between science process skills and achievement in science in the case of both LD and ND children.

Sreedevi (2008) had conducted an exploratory analysis of developmental history and behavioural characteristics of children with learning disabilities. The preliminary sample consisted of 124 children identified as learning disabled by a team of specialists in an institute. A sample of 30 children were short-listed after excluding cases of dyscalculia, speech problems, and other impairments. These 30 children were studied in detail through psychological tests, interview and observation. After a further scrutiny, the sample size reduced to 12, with five children having dominant problems in reading and the remaining seven having dominant problem in writing. An exploratory design with case-analysis approach was followed by the investigator. Malin's Intelligence Scale for Indian Children (MISIC), Test of Memory for children, Quick Neurological Screening Test, Revised Edition, (QNST), Symptomology Check list of Learning Disabilities adapted from Harwell (1989), Interview with parents regarding present problems, academic and personal history, developmental problems observed, if any and Unstructured tasks developed by the investigators as and when necessary were the tools used for data collection. The study suggests that such programmes should address the underlying problem and should be designed in an individually specific manner. The study also argues for more conceptual clarity. The role of instructional and cultural factors should be meaningfully incorporated. For diagnosis, well-defined classification system is essential.

Berg and Hutchinson (2010) had conducted a study of Cognitive Processes That Account for Mental Addition Fluency Differences between Children Typically Achieving in Arithmetic and Children At-Risk for Failure in Arithmetic. In this

study the researchers investigated that whether processing speed, short-term memory, and working memory accounted for the differential mental addition fluency between children typically achieving in arithmetic and children at-risk for failure in arithmetic. Forty-eight elementary school children served as participants for this study. Children were classified as being at-risk for failure in arithmetic (AR,  $n = 24$ , 10 boys and 14 girls) if they scored at or below the 25th percentile in arithmetic and above the 25th percentile in reading. The typically achieving group (TA,  $n = 24$ , 11 boys and 13 girls) represented children who were similar in chronological age to the AR children and whose percentile scores were above the 25th percentile in arithmetic and in reading. Results suggested two important findings. First, working memory completely accounted for simple mental addition fluency differences between Children Typically Achieving in Arithmetic and Children At-Risk for Failure in Arithmetic. Second, while working memory had the strongest effect on reducing differences in complex mental addition fluency between children typically achieving in Arithmetic and children At-Risk for failure in Arithmetic, group differences remained after accounting for the contributions of processing speed, short-term memory, and working memory.

Simoncelli and Hinson (2010) conducted a study of Designing Online Instruction for Post-secondary Students with Learning Disabilities. Researchers detailed in their study that the methodologies that could be used to better deliver online course content to students with learning disabilities and whether the design of the course affects the students' attitudes and performance. These include digitally delivered instructional audio, various textual interactions between the students, and

other assistive methodologies. The methodology and pedagogical side of the delivery of the online course was found to be beneficial to students with learning disabilities.

Sweeney and Carly (2010) had investigated “The metacognitive functioning of middle school students with and without learning disabilities during mathematical problem solving.” The purpose of the study was to investigate the metacognitive functioning of students with learning disability (LD), low achieving (LA) students, and average achieving (AA) students with the context of math problem solving. To assess metacognitive functioning, students were administered a structural interview and a survey and they solved three math word problems. Additionally to assess math problem solving ability students were administered a ten item math word problem solving test. The findings of the study revealed that i) Students with learning disability demonstrated a different pattern of metacognitive function than average achievement students and low achievement students. ii) Students across ability groups look relatively equivalent in the quantity of metacognitive skills but in quality of metacognitive skills ability group differences were evident. iii) Metacognitive knowledge was a significant predictor of math word problem solving performance for AA students but not for the other ability groups. iv) There was a significant difference in the relationship between metacognitive experience and math word problem solving for students with learning disability and average achievement students.

Wong and Chin (2010) had investigated the “Possibilities for engagement: Exploring the participation of students labeled as learning disabled in the classroom

discourses.” The study examined the Culturally and Linguistically Diverse (CLD) students with labels of learning disabilities in their English, Maths and Social Studies classes. The study was conducted at a low income, public school with a class of eighth graders in their Collaborative Team Teaching (CTT) classes, English, math and social studies. Ethnographic inquiry tools such as observation, interview with teachers and students and document of students and teachers work were collected to understand the context of engagement and disengagement. The findings revealed that students’ academic performances vary widely in different participatory structures. There were mutually constitutive relations between instructional contexts and student’s enactment of their “disabilities”. Examination of the teachers’ perceptions of students background indicate that while the teachers, in general, acknowledge the rich experiences of students cultural, linguistic and social class backgrounds, they hold less nuanced interpretations of students’ abilities, drawing upon normative and hierarchical conceptualizations.

Berninger and May (2011) conducted a study on evidence-based diagnosis and treatment for specific learning disabilities involving impairments in written and/or oral language. Findings of the study suggested the importance of considering individual differences in planning and evaluating response to instruction and modifying instruction when a student is not responding or recognizing. Teaching may change epigenetic gene expression at one stage of schooling, but not the underlying gene sequences that render. Individuals are still vulnerable as curriculum requirements increase in nature, complexity, and volume in the upper grades. Using evidence-based diagnoses of specific learning disabilities that are consistent across

states for free and appropriate education from K to 12 and for accommodations throughout higher education.

Andabil (2012) had conducted a study on The influence of teacher's knowledge about learning disabilities on their feedback and emotional reactions. The sample included 188 teachers (female = 94 & male = 94) from government run middle schools in Iran. The materials used for data collection were Proforma to collect demographic information about participants and Vignettes: Eight vignettes describing High Ability-High Effort LD student, High Ability-Low Effort LD student, Low Ability-High Effort LD student, Low Ability-Low Effort LD student, High Ability-High Effort NLD student, High Ability-Low Effort NLD student, Low Ability-High Effort NLD student and Low Ability-Low Effort NLD student. The findings revealed that teachers generally gave greater rewards and less punishment to the students with LD than their NLD peers. Also, they felt less anger and more pity toward LD students than their NLD peers following test failure. Expectations of future failure were higher for students with learning disabilities, as well.

Bane, Deely, Donohoe, Dooher, Flaherty, Iriarte and Doherty (2012) studied the perspectives of people with learning disabilities on relationships and supports in the Republic of Ireland. A national research network consisting of 21 researchers with learning disabilities, 12 supporters and 7 university researchers conducted the study. The study revealed that people with learning disabilities have a diversity of experiences and views on relationships and they need support to keep them. Individuals with learning disabilities involved in focus groups reported that they



need more help from friends, family and services staff to build new relationships and keep their existing ones.

Ho and Siegel (2012) had conducted a study titled Identification of Sub-Types of Students with Learning Disabilities in Reading and Its Implications for Chinese Word Recognition and Instructional Methods in Hong Kong Primary Schools . The major finding of the study was that while students with surface dyslexic pattern made more phonological errors, students with phonological dyslexic pattern made more semantic errors.

Garg (2013) had investigated Impact of various instructional approaches on written expressions skills of children with learning disability. 40 children were selected based on some criteria such as Children with IQ 90 and above, Children who had a composite score below 50 in DTLTD, Learning disabled children who had a score below 3 in expressive language area of DTLTD indicating severe problem and Learning disabled children with scores below 40% in Test of Written Expression for the sample of the study. Pre-test, post-test experimental and control group design was used for the study. Tools used were Malin's Intelligence Scale for Indian Children (1969), Diagnostic test of Learning Disability, Test of Written Expression for grade III and IV and Teacher Referral Form.. The result of the study revealed that there was no enhancement in the IQ of the learning disabled children who were not given any intervention. It also revealed the significant role and effectiveness of self- regulated strategy development approach, direct instruction approach and eclectic approach.

Sumati (2013) had developed an instructional material for learning disabled students of secondary school. The sample consists of 500 home science students, out of which 23 students have some sort of learning disability. Tools used in for the study were Diagnostic test of Learning Disability (DTLD), Checklist for Learning Disabled Children (CLDC), Raven Progressive Matrices Test A, B, C, D and E (RPMT) and Achievement test in Home Science (ATHS). The result of the study revealed that the strategy instruction improved the performance of the students with learning disabilities.

Gopalan (2015) had conducted a study about Impact of B.Ed. Programme on Student Teachers in Developing Professional Competencies for Handling Learning Disability. The sample of the study constituted students of Mathematics optional class of 15 B.Ed. colleges in Kerala state. The instruments used for the study were Learning Disability Perception Scale, Learning Disability Identification inventory and valued lesson plans based on the Scoring scheme adopted from Rehabilitation Council of India guidelines. The statistical techniques used in the study were Descriptive statistics like Mean, Median, Mode, Standard Deviation, Skewness and Kurtosis, Analysis of Variance (ANOVA), Test of Significance of Difference between Means and Test of Significance of Difference between two Proportions. The findings of the study concluded that Perception about Learning Disability of student teachers does not vary considerably during the entire B.Ed. programme and also showed that student teachers' Perception about Learning Disability does not influence their Instructional Planning.

Kennedy, Deshler, and Lloyd. (2015) had investigated “Effects of Multimedia Vocabulary Instruction on Adolescents with Learning Disabilities.” The purpose of the experimental study was to investigate the effects of using content acquisition podcasts (CAPs), an example of instructional technology, to provide vocabulary instruction to adolescents with and without learning disabilities (LD). A total of 279 urban high school students, including 30 with LD in an area related to reading, were randomly assigned to one of four experimental conditions with instruction occurring at individual computer terminals over a 3- week period. Each of the four conditions contained different configurations of multimedia-based instruction and evidence-based vocabulary instruction. Dependent measures of vocabulary knowledge indicated that students with LD who received vocabulary instruction using CAPs through an explicit instructional methodology and the keyword mnemonic strategy significantly outperformed other students with LD who were taught using the same content, but with multimedia instruction that did not adhere to a specific theoretical design framework. Findings showed that, results for general education students mirrored those for students with LD. Students also completed a satisfaction measure following instruction with multimedia and expressed overall agreement that CAPs are useful for learning vocabulary terms.

Thomas (2015) had investigated Effectiveness of developed multisensory strategy on academic achievement of children with learning disability at primary level. The sample for the study was the primary school students in Kottayam district. For the experiment, 66 students with Learning Disability were identified from the total sample by administering the Diagnostic Test for Learning Disability (DTLD),

Intelligence Test, Achievement Motivation Scale and Learning Problem Checklist. The identified learning disabled students were divided into experimental group and control group. The experimental group was taught using the developed Multi Sensory strategy (MSS) and the control group with the Conventional Activity Oriented Method (CAOM). Survey and experimental methods were used for collecting relevant data for the study. The tools used in the study for the collection of data were Diagnostic test for Identifying Learning Disability (DTLD), Raven's Standard Progressive Matrices (RSPM), Learning Problem Checklist, Achievement Motivation Scale, Interview schedule, Lesson transcripts based on Multi-Sensory Strategy (MSS), Lesson transcripts based on Conventional Activity Oriented Method (CAOM) and Academic Achievement Tests on English, Malayalam and Mathematics. The findings of the study revealed that the Multi-Sensory Strategy is found to be more effective than Conventional Activity Oriented Method on Academic Achievement among children with Learning disability at primary level.

Varugheses (2015) had conducted a study on Creativity achievement motivation and academic attainments of secondary school students with learning disabilities. 2012 secondary school students were selected from 46 schools of Pathanamthitta district using purposive random sampling technique. From the selected 2012 students the investigator identified 222 students as Learning Disabled using a set of pre-determined criteria. Then the investigator selected 222 Normal students from the remaining sample using systematic sampling. Thus the investigator used 444 students for further study. Normative Survey Method for the study. Tools used for the study were Diagnostic Test of Learning Disability prepared

by the Investigator, Learning Disability Check List prepared by the Investigator, Learning Disability Behaviour Rating Scale prepared by the Investigator, Raven's Progressive Matrices A, B, C, D and E, Baqer Mehid's Non-Verbal Test of Creativity for Secondary School Students and Standardized Achievement Motivation Scale prepared by the Investigator. To analyse and interpret the data, the investigator used statistical techniques such as Pearson's Co-efficient of Correlation and the relevant conventions for its interpretation, Test of significance of the correlation co-efficient 'r' , Confidence limits for correlation coefficient, Shared variants or percentage of overlap, Test of significance for difference between two 'r's, t-test of significance for difference between means (large independent sample), Partial correlations between two variables when the effect of third variable is partialled out and Regression equations using partial correlation and beta coefficient. The study showed that around 11% are Learning Disabled in the selected sample of Secondary school students. The findings of the study showed that though Learning Disabled students are potentially equal with that of Normal students, they lag behind significantly in Academic Attainment. The study also revealed that Learning Disabled students have very low level of Achievement Motivation.

Jawahar (2016) investigated about Co Morbidity of conduct disorders and learning disabilities of upper primary children in relation to academic performance. 588 upper primary students those who are studying in 6<sup>th</sup> and 7<sup>th</sup> standards from 16 schools in Ponneri educational district of Thiruvallur district was the sample for the study. Descriptive survey method was used for the study. Tool used for the study were Conduct Disorder in Students- Assessment Scale for Teachers and Learning

Disability in Students- Assessment Scale for teachers. The findings of the study concluded that the upper primary children are having conduct disorder and learning disabilities and co-morbid condition of these two variables and also negative impact on the academic performance. It is concluded that if conduct disorder exist in the upper primary children learning disability also exist as co-morbid vice versa.

Rasmi (2016) had investigated Effect of Hatha Yoga based intervention technique on learning disability. 250 children with learning disability were constituted the sample of the study. Both survey method and experimental method were used by the investigator for the study. Probability plot, Correlation analysis, two-way ANOVA, Repeated measures of ANOVA, ANCOVA were the statistical techniques used by the investigator for data analysis. the findings of the study concluded that academic self concept, achievement motivation and educational aspiration are influencing factors of academic performance of the adolescent students with learning disability, moreover, the intervention program proved as an effective alternative therapy for improving the Academic self concept, Achievement Motivation, Educational aspiration and in turn the Academic performance of Adolescent students with learning disability.

Lalu (2017) experimented the effectiveness of problem based learning in developing basic mathematics operational skills among dyscalculia student at primary level. The study was conducted on a sample of 160 primary school students selected through random sampling technique. Quasi experimental design was used in the study. The experimental group was taught Mathematics using Problem based Learning strategy and the control group was taught through the Activity Oriented

Method of teaching. It was found that problem-based learning is effective than prevailing activity-oriented method in developing basic mathematics operational skills among students with Dyscalculia.

Gayathridevi (2018) had conducted a study on Temperament Character and executive functions among students with learning disabilities and without learning disabilities. The study has been carried out in two phases. In the first phase, the instrument, Early Adolescent Temperament Character Inventory (EATCI) was developed for assessing the temperament and character of the participants. In the second phase, the EATCI and Wisconsin Card Sorting Test (WCST) were used to collect data. The participants of the present study were 40 students with learning disabilities and 40 without learning disabilities. The descriptive research design was used for the study. Statistical techniques such as the comparison of mean, median, mode, skewness, kurtosis, and standard deviation, Student's 't' test and correlation were used for the study. The findings of the study reveal that there is a significant difference in temperament, character and executive functions among students with learning disabilities and without learning disabilities. The executive functions of students with learning disabilities had a significant moderate relationship with temperament [especially in the dimensions of Effortful Control (EC), Surgency (S) and Affiliativeness (AF)] and character [Self-Directedness (SD) only]. In the case of students without learning disabilities, the executive functions had a significant moderate relationship with temperament only.

Naresh and Thenmozhi (2018) studied the prevalence of specific Learning Disabilities among students studying in Aided and Government Schools in Chennai

city. This study was a cross-sectional survey conducted among 949 seventh standard children in Chennai. Multi staged Stratified randomized cluster sampling design was used to collect the data. The result showed that prevalence of Learning Disabilities was found to range between 3% for Arithmetic problems and 33% for writing problems, in the given sample.

### **Studies related to case study**

Evelo and Price (1991) conducted a case study on Transition of Students with Learning Disabilities which illustrated the transition process of one individual with learning disabilities during a 3 year period. It described the experiences of the case after graduation from high school and went on to a local community college. Specific transition objectives, personalized counseling, and individual accommodations are discussed in detail, with both secondary and postsecondary examples. Relevant research and recommendations pertinent to service providers who work with adolescents and adults with learning disabilities are also provided such as there is a pressing need for more longitudinal research to be done which applies to the transition process for adolescents and adults with learning disabilities, Continuous life-long support for individuals with learning disabilities must be provided, Secondary and postsecondary service providers should prepare individuals with learning disabilities for independence etc.

Armfield (2007) had conducted a descriptive case study of teaching and learning in an innovative middle school program. The purpose of this study was to create a description of how learning and teaching were conducted in a program that operated under such conditions. The TILE program was bound by four main



components: the middle school philosophy, technology integration, student achievement (in particular Arizona's Instrument to Measure Standards (AIMS)), and the National Aeronautics and Space Administration (NASA) Explorer Schools (NES). The study focused on fifty-seven students, two teachers, one student teacher, and the learning environment they interacted. To fully develop the intricacies of the program, the researcher gathered data from a number of sources utilizing multiple methods. The sources of the data were the teachers, the students, teacher documentation, and the learning environment. Investigator used multiple techniques for collecting data such as face to face interview, observation and questionnaire. The findings reveal that the TILE program has a clear focus on using technology in the learning environment. The findings demonstrated levels of learning in the program by unpacking the types of assignments required and the interactions between students and teachers during classroom conversations.

Covigton and Eastwick (2009) had conducted a study "Co-teaching in a high school history class: A case study of students with learning disability." The main objective of the study was to explore the instructional factors that may contribute to the achievement of high school students with learning disability who are placed in a co-taught settings. Qualitative method was used for this case study and which was supplemented by quantitative data. An optimal environment was created for co-teaching and included careful selection of the co-taught team, support from the campus administration, initial and on-going training for the co-teachers and the creation of common planning periods. Two co-taught classrooms were observed for one semester and five students with learning disabled students were selected from

these classrooms for observation and interview. Additional data included interviews with the campus principal, campus teachers and the co-teachers as well as weekly observations using stalking observation system. The findings of the study revealed that that there was little change in teachers or student behavior.

Lewis (2010) in a study, *Understanding Mathematical Learning Disabilities: A Case Study of Errors and Explanations* explored the origin of different kinds of errors that made by students with mathematical learning disabilities than both typically achieving and low-achieving students through a detailed analysis of one student with a Mathematical Learning Disability. Data were drawn from a longitudinal study of weekly videotaped tutoring sessions during the student's eighth through twelfth grade years. The study suggested that a detailed analysis of students' problem solving can reveal the origins of the qualitative differences that typify MLD, and provide information that can contribute to strategies for remediation.

Brady (2014) had conducted a case study of student and teacher relationships and the effect on student learning to explore the affective domain of teacher student relationships. The sample of the study consisted of 700 students and 75 teachers from public elementary school, East Bay Rhode Island. The data were collected by using Archival records, interviews and direct observation. The result of the study revealed that the essence of a strong teacher and student relationship revolves around how it affects the teaching and the learning going on in a classroom. The findings of this study stressed the importance of providing several strategies for practical ways to successfully build a relationship with students that could have an impact on their learning environment.

Lichtinger and Kaplan (2015) conducted a case study about Acceptance and Commitment Therapy (ACT) with a learning disabled young person experiencing anxious and obsessive thoughts. This case study described how the ACT model was adapted to treat anxious and obsessive thoughts in a young person with moderate/severe learning disabilities. The result of the study suggested that the experiential, activity-based nature of ACT may offer a more accessible intervention model for learning disabled people than traditional CBT models based on verbal reasoning skills.

Nagavalli (2015) conducted a study on "screening and identification of dyscalculic fifth standard children in Selam". Investigated children's challenges in five dimensions, including visual perception and processing, abstraction, memory loss and motor disability using survey tool. The study found the children had poor sense of number, weak long-term memory, good short-term memory, difficulty in working memory and difficulty in sequencing.

## **Conclusion**

Studies in the area of learning disability are large in number focusing on individual types of learning disability. A number of studies are based on the different strategies for students with learning disability. Short term memory, average intelligence, and introversion are found as the characteristics of children with LD. Many studies emphasized the need of support from teachers, family and peers for the development of such students. The number of case studies is few compared to that of learning disability and case studies in the area of Learning disability are very rare. Case studies in the area of LD have contributed valuable information about the procedure of dealing students with LD and hence the present study is a valuable one.

## **METHODOLOGY**

Methodology shows the path through which the researcher formulates the problem, identify the objectives, collect relevant data and present the result in a conclusive form. The quality of research work depends upon the appropriateness of the method used. The present study is an attempt to analyze five cases with learning disability, who are identified as having single or multiple learning disabilities like Dyslexia, Dysgraphia, and Dyscalculia by an authorized testing agency.

The methodology of the study is presented below under the following heads,

- Research Questions.
- Objectives
- Method used
- Participants of the study
- Techniques and instruments used for data collection
- Data collection Procedure
- Techniques used for analysis

The detailed description of each is given below

### **Research questions**

The research questions set for the study are

1. What is the level of intellectual ability of the selected children with learning disability?
  - a) What is the nature of learning disability of the case?
  - b) Whether the child with learning disability has normal level of intelligence measured using Raven's coloured progressive matrices and MISIC (Malins Intelligence Scale for Indian Children).
2. What is the personal and familial background of the selected children with learning disability?
  - a) What is the socio economic status of the family of the child with learning disability?
  - b) Whether the child with learning disability has a normal developmental history?
3. How do the children with learning disability perceive themselves and social support they receive?
  - a) How did the child with learning disability perceive himself?
  - b) How does the child with learning disability perceive classroom, teachers and the subject?

- c) How does the child with learning disability perform in various subject areas?
- d) How does the child with learning disability perceive the social support he/she receives?

### **Objectives**

The objectives of the study are

1. To analyse the intellectual ability of the selected children with Learning Disability.
2. To analyse the personal and familial background of the selected children with Learning Disability
3. To know the perception of the select cases about themselves and the social support they receive.

### **Method used**

The study used multi model case study approach with five primary school students identified as having learning disability. Data collection was done through testing, interview, observation and document analysis.

### **Participants of the study**

The study being a case study, cases are more important than the population. The purpose of the study is not generalizing the findings to the population. Population of the present study consisted of children studying in primary schools of

Kerala having single or multiple learning disabilities like Dyslexia, Dysgraphia, and Dyscalculia. The sample or the cases for the present study consisted of five primary school students selected through purposive and convenient sampling technique. The five students selected for the study belongs to Malappuram district of Kerala state and are identified with dyslexia and dysgraphia by CDMRP (Community Disability Management and Rehabilitation Program), Department of Psychology, University of Calicut in the year 2019. The demographical details of the cases are given as table 1.

Table 1

*Demographical details of the cases selected for the study*

SI No.	School	Standard	Gender	Age
1	AMUP School Chathrathodi, Malappuram	5	Male	11
2	AMUP School Velimukk, Malappuram	5	Male	11
3	SantheepaniVidyaNiketan, Thenjipalam, Malappuram	5	Male	12
4	AMUP School Pallikkal, Malappuram	4	Male	10
5	AMUP School Pallikkal, Malappuram	3	Male	9

### **Techniques and Instruments used for data collection**

A case study necessitates in depth analysis of the case and hence need data available through different methods and techniques. The techniques used together with the instruments used for collecting relevant data are given below.

1. Non-participant observation with an observation schedule.
2. Scheduled interview with parents, teachers and children.
3. Document analysis to get more details about the cases.
4. Raven's Coloured Progressive Matrices to measure intelligence of the cases.
5. Malin's intelligence scale for Indian children (MISIC) (data availed from the testing agency)

The detailed description of each technique/ instrument employed in the study is given below.

### **Observation.**

Observation is a prevalent method to collect information about the spontaneous behavior of participants in their natural surroundings. In this method, human behavior is observed and relevant data are gathered on its basis. It is a direct technique to measure human behavior under different types of social circumstances. Observation is a process in which one or more persons observe what is occurring in real life situation. It is used to evaluate the overt behavior of an individual in controlled and uncontrolled situations.

In participant observation the observer becomes a member of the group which he wanted to observe. The observer has to play a dual role. While taking active part in the group the observer observes that behavior of the individual member of the group or group as a whole. The member of group will not be conscious about the fact that they are being observed. In non-participant



observation, the observer is not a part of the group being observed. The Observer Chase a position so that his Presence is not disturbing the group. Observation schedule is a document, analytical form, or coding sheet, prepared before the collection of data. It specifies the behavior and situational characteristics to be observed and filled out by researcher during observation or after observation. The data recorded during the observation are aggregated to useable, quantifiable data later.

The present study used non participant observation technique to observe the child's behaviour and approaches inside the classroom, outside the classroom and with peers and teachers. The investigator also observed how the child uses his free time in the school. The observation schedule is attached as Appendix A,

### **Interview**

Interview is a friendly conversation between two or more people where a person is asked questions to elicit the answers. There are different types of interviews based on the number of people who participated, the planning involved, the facilities or settings etc...

For collecting data, the investigator conducted the semi-structured interview with child, with parents, and with teachers. The interview schedule for the child consisted of personal details and items regarding the interest, health, food habits, friends circle, support from peers, teachers and family of the child. The interview schedule for parents consisted of preliminary details and pre-natal, natal and post-natal related details, birth order, health conditions of both mother and child, interests

of both mother and child, vaccination details, support of parents, behaviour of child, physical growth, sleep, family background, academic progress of child, etc. The interview schedule for teachers consisted of items related to performance of student, behavior, progress, method of teaching, behaviour of parents etc. Interview schedule for student is attached as Appendix B, Interview schedule for teacher is attached in Appendix C, and Interview schedule for parents is attached in Appendix D,

### **Document analysis**

Document analysis is a form of qualitative research in which the researcher interprets the documents to give voice and meaning around an evaluation topic. In the present study, for collecting data the researcher conducted a detailed analysis of the records of academic details of the child from the first standard itself.

### **Raven's coloured progressive matrices**

Raven's Colored Progressive Matrices (CPM) is a non-verbal intelligence measure that reflects general intellectual ability or the factor "g" introduced by Spearman. CPM was developed to assess children aged from five to 11 years old, mentally disabled individuals and the elderly. Validity, reliability and standardization studies conducted in Brazil included individuals aged from five to 11 and a half years old.

### **Scoring of CPM**

The test is composed of three sets/scales (A, Ab and B) with 12 items each. The sum of these sets composes the general score and there is no score per scale. The items are organized in ascending difficulty over the course of three sets (A, Ab,

and B); the B set is more difficult than Ab on average, which in turn is more difficult than the A set on average. The items consist in a drawing with a missing part, which the individual needs to complete by choosing one among six alternative responses. There is only one correct answer for each item. A score 'one' is given for each correct response and 'zero' for each wrong response. The minimum score is zero and the maximum score is thirty six. The instrument can be applied individually or in groups and there are no time limitations.

### **Validity and Reliability**

The manual says that the concurrent validity of the test is established by correlating the score with that of the WISC ( $r=.91$ ) and the primary mental ability test ( $r=.55$ ). The internal consistency coefficients are reported to be from .71 to .90. The CPM Manual of Evaluation declares the CPM has an extremely satisfactory level of reliability assessed by split-half and test-retest method. The test-retest reliability of CPM range between .80 and .90. The split-half reliability Coefficient of CPM is found to be varies from .82 to .87 for Children of age group 5 to 10.5 years

### **Malin's intelligence scale for Indian children (MISIC) (1969)**

Malin's intelligence scale for Indian children has been adapted from the American test WISC developed by Wechsler. The Indian Scale has been constructed by Malin of Nagpur. During adaptation an almost total revision had to be made of the test, especially of the culturally biased verbal items. So the test was named as Intelligence Scale for Indian Children- ISIC or MISIC. MISIC is an intelligence test

for children from the ages of 6 to 15 years 11 months. It is administered individually and takes about 2 to 2-1/2 hours. The test comprises of 12 subtests divided into two groups, Verbal and Performance. Verbal Scale consists of 6 subtests and Performance Scale consists of 5 subtests.

This test usually used by psychologist to measure the intelligence of disabled children. The investigator used secondary data in this case. The data collected by testing agency during their counseling procedure of the individual was taken for the present study.

#### **Data collection procedure**

For the present study the investigator collected data mainly through observation, interview, content analysis and intelligent tests. For the purpose of collecting data, first of all the investigator contacted an authorized testing agency CDMRP (Community Disability Management and Rehabilitation Program) and collected information about children with learning disability on request and with the condition that the identity of the student will not be revealed and the data will be used only for research purpose. From the available list of students with disability, the investigator selected five cases purposefully based on the criteria that these students are studying in schools in the neighborhood of the researcher's residence so that the observation and interview can be done effectively.

After collecting information about the school in which the student learns, the investigator visited the school and sought permission from the headmaster for collecting data about the case. The investigator explained the procedure of collecting

data to the headmaster and the class teacher. Investigator spent full day in each school, observing the performance and behavior of the case outside and inside the classroom for one week for each case. The information through observation was recorded, conducted intelligent tests to assess the intelligence of the cases, and interviewed the case for gathering information about his personal details, personal interests and the support he receives. Interview with teachers was done to know about academic performance and behavior of the case. Investigator also collected academic reports of the case. For collecting information about personal details, family background, health conditions of the cases the investigator conducted interview with parents of each case participated in the study.

#### **Techniques used for analysis**

The investigator observed the child's behavior and interviewed the child, teacher, and parent. Data collected through observation and interviews were analyzed. The information of the document analysis was also incorporated to the analysis. While analyzing the data collected from various sources about the cases, the method suggested by Atkinson (2002) was used.

## **ANALYSIS AND INTERPRETATION**

Analysis is an important part of a research in which the data collected is presented in an organized way and analysed to know the interrelationship and nature of data. The present study being a case study, data collected has to be processed in four steps (Atkinson, 2002). According to him as a first step, a data repository is to be created which is derived from the research questions or reviewed studies in the area. As second step 'codes' to identify the respective chunks of data are created. Codes are labels that give units of meaning to the data and it allows a quick identification of segments related to research questions and the potential themes. The third step is analysing the case study data by generating a variety of reports. The fourth is for generating the trial propositions by linking the rationalised codes back to the initial propositions.

The information collected through various techniques and tools are coded into various categories for each case. The details are given below.

### **Case I**

An 11 year old boy studying in fifth standard in an Aided U. P. School in Malappuram district of Kerala, identified as a student with dysgraphia by CDMRP. He belongs to Peruvallur Grama Panchayath and his family includes father, mother, an elder sister and an elder brother.

## **Data through Observation**

### **Personal**

The child is more independent and does his personal matters by his own. He is punctual and studious, but hyperactive.

### **Social**

After reaching the school he keeps his bag in the classroom, then he engages in games with other students. He is friendly to others and all other students accept him also. He is very friendly to the teachers.

### **Academic**

He occupies front bench seat and he is found to be hyperactive in the class, while answering the questions that teacher asks, he is not considering whether the question is to him or not, whether the answer is correct or not. But most times the answers are found to be correct. Teacher also scaffolds him by giving necessary supports while he fails to reach at the expected level. He is found to have a very short span of attention but will be returned to the situation within few seconds. He writes down the notes correctly and neatly when it is written on black board with an average speed, but fails to write it correctly when dictated. Some words and numbers are found to be skipped while writing and mistakes are also committed in writing when the content is not written on black board.

**Interview (with the child)**

**Personal**

He does all his daily routine himself such as brushing, bathing, having food, wearing dresses etc. But he doesn't wash his dress or keep it on the shelf. All such jobs are done by his mother. He helps his mother collect firewood and other small jobs at home. His favourite food is shawarma. He gets shawarma every Thursday. He enjoys travelling. When his father come from abroad, they usually go for long trips. He comes to school on his bicycle.

**Social support**

He gets great support from his peers. His mother helps him to complete learning activities. He learns the lessons and does homework with the help of his mother. His brother and sister also help him in learning occasionally.

**Academic**

English is the most difficult subject for him. It is very hard to get along with everyone while writing.

**Interview (with the teachers)**

**Academic**

According to his teacher, his academic performance is good but he didn't participate in any co-curricular activities. The teacher also opined that the child's academic achievement is comparatively increasing. The child attends class



regularly. He got above average marks in Hindi, below average marks in English, Social Science and average marks in other subjects.

### **Social**

The teacher says that, though he is not a naughty boy, he is restless in the class. Frequently he complains about others, but at the same time he interacts friendly with other children. He gives respect to all the teachers in the school. The teacher could not observe any negative behaviour of the child towards teachers or any others in the school.

### **Social support**

To overcome the writing problem, teachers provide him with various writing activities. The teacher reads the notes repeatedly or writes down the notes on the blackboard. Other children also help the child to complete his notes. His parents give due care and importance for his learning, moreover his father maintains regular contact with his teacher to understand his level of learning and progress.

### **Interview (with the parents)**

#### **Parental status**

The child's mother and father completed the tenth standard of schooling. His mother is a housewife and father is a Wireman at abroad. His mother was 20 and his father was 27 when they get married, and they are distant relatives. His mother's family consists of highly educated people.

### **Pre natal, natal and post natal details**

The mother was 25 years old at the time of her pregnancy. During pregnancy, all check-ups were done on time. He was their 3rd child. There were no illnesses during pregnancy. There was no heavy work other than household work. Also there were no accidents. The delivery was caesarean.

### **Health conditions of Child and Mother**

Before and after delivery his mother ate foods that are common, mainly vegetables. She was regular in sleep. The weight of the baby was 3.05 kg. The child was vaccinated at the right time. He was not sick at the time of his birth and after the delivery mother was healthy. In early childhood he got enough nutritious food and now he takes enough food regularly. At the age of four, the head nerve was damaged due to an accident and was recovered within two months.

### **Child's habit**

He loves to listen to stories and he loves story books also. He doesn't read any of the stories himself. His favourite toys are vehicles and he tries to repair anything he finds. When he leaves school, he regularly plays with the children at home. When the child comes home, rarely he shares with his mother what has happened in the class. The child maintains good relationships with other children. He behaves lovingly with his family members.

### **Academic**

His learning difficulty in writing was recognized by teachers during exam, and counselling was given for the past four years. Counsellor is confident that the learning difficulty would be okay by proper training. His mother takes care of his studies.

### **Participation in co-curricular activities**

He is not an active participant in any of the cultural programmes and sports.

### **Document Analysis**

#### **From School**

Academic performance is increasing, but progress is very slow. He got above average marks in Hindi, below average marks in English, Social Science and average marks in other subjects. He writes the notes correctly and neatly. His handwriting is good, but he makes a lot of mistakes in his writings.

#### **From CDMRP**

He is a student with dysgraphia. His intelligence score on MISIC test is 97. It shows he is an average intelligent student.

### **Individual Testing**

The test score on Raven's Coloured Progressive Matrices is 31 out of 36. It indicates above average intelligence. Investigator helped him to understand some questions. 36 questions were answered in 19 minutes.

## **Case II**

An 11 year old boy studying in fifth standard in an Aided U. P. School in Malappuram district of Kerala, identified as a student with dyslexia by CDMRP. He belongs to Thenhipalam Grama Panchayath and his family includes father, mother, brother and two sisters. He comes to school by school bus.

### **Data through Observation**

#### **Personal**

He is very interested to come to school. He doesn't play outside and wander in the corridor. He doesn't disturb or make fun with others. He doesn't speak with others and often murmurs himself. He becomes active as well as silent, the shift being sudden. He keeps discipline and participates in the assembly. He is not attending the entire assembly programme. He used to admit the slogan in the rally after the assembly. He goes back to the class silently. He has a fixed seat, but he sits in other seats in the class, but other students do not quarrel with him. He has a running habit in the class, when the teacher comes he goes back to his seat and brings his attention to the teacher. He doesn't go outside even in the interval time, but he runs around the class. He used to take his dish and goes to get his lunch and goes back to his seat and takes the food disorderly. He cleans the waste on the floor and cleans his dish properly. After food he spent his leisure time in the class and corridor. After bell rings he entered the class and sits anywhere. When it is almost time to go home after school he gets ready with his bag. When the bell rings suddenly he ran to the bus.

### **Social**

After reaching the school, he will come here and there. He doesn't mingle with others. And he has no best friend. He doesn't fight with others and doesn't shout at others nobody is keeping off and no one trying to add him in the group. He doesn't play or talk with others. He spends more time in his class room than the corridor. He respects the teachers and behaves very friendly.

### **Academic**

He is regularly attending counselling for learning disability. He is an average student. He is a passive listener, he doesn't ask any doubts in the class. However, when the teacher asks question he replies with others. He didn't answer loudly due to the fear of whether it is right or wrong. However he has no difficulty in copying and he is writing slowly. He has difficulty to read and makes mistakes while reading. He doesn't express his own contributions and opinions other than hearing others opinions and ideas in the class group activities. He doesn't note the points of group discussion. When it was his groups turn he is the one who presents the speech first. He started without fear and read slowly and made some mistakes while reading. He faced difficulty to read. First he read it silently and then started to read clearly. Teacher's help while reading increased his self-confidence. The teacher was giving him special attention throughout his reading. After reading he took his seat and listened to the presentation of the other groups. He completed the number game given by the teacher successfully. And he participated in the game very carefully. He was very happy when he won the game. He writes carefully in his note book. Even if his hand writing is a little bad, he draws very well. He has drawn pictures of

birds, vehicles and animals very beautifully. Even he is little backward in studies, his performance in the non-academic areas are valuable.

### **Interview (With the child)**

#### **Academic**

Most difficult subject for him is Hindi. He is writing very slowly and in reading, he faces more difficulties

#### **Personal**

He wakes up when somebody calls him. He does everything, including bathing and brushing himself but after someone's compulsion. He knows how to do his own laundry. But mother folds clothes. His favourite meal is milk and idali, it gets twice a month only. He is not helping in any of the domestic tasks. The child loves to travel and occasionally he travels with his family.

#### **Social support**

Although his mother is concerned with his studies, she did not help him sufficiently. She supports him during the examination time. He could improve his learning performance with the aid of teachers. The brothers didn't care about his studies. When there is counselling, after attending a counselling session, he comes to school with his mother. His peers and teachers give great support to his learning process.

**Interview (with teachers)**

**Academic**

He regularly attends the class, without any hesitation. The teacher says the student's performance in academic activities is below average. Teacher says he can do all daily tasks without any difficulty. He does it correctly, but in learning activities he faces difficulties. While he is a below-average student, there are some students with poor performance than him. He answers all the questions accurately, though taking more time than others and he is still trying to learn. Maths teacher says he finds it difficult to calculate, but by using his fingers he is not bad in mathematical calculations. According to all his teachers, every day he gets better. Continued counselling can also be of great help in improving learning progress.

**Social**

He shows immense respect for all teachers and he behaves well and obeys them properly. He always acts very friendly with his peers and never quarrels with other students. He makes complaints in very rare cases; there is no other mischievous character in him.

**Social support**

He need support from others to learn especially the home assignments. So teachers give him small portions only for home work. He does it successfully. Teacher has asked other children to support him and other students help him learn the right way. Teacher says that whenever he gets the support of others he is very attentive.

### **Co-curricular activities**

He is very good at co-curricular activities. He participated in the race and the long jump and won the prize. He also sang and won the prize in the art festival. He also participates in madrasa art festival. Since his father is abroad, mother focuses on his studies.

### **Interview (With parents)**

#### **Parental Status**

The child's mother completed tenth and father completed the fourth standard. His mother is a housewife and the father is a labourer. At the time of marriage, his mother was 20 year old and his father was 26. There are no highly educated people in the family.

#### **Pre-natal, natal and post natal Details.**

The mother was 27 years old at the time of her pregnancy. Before and after delivery, his mother ate foods that are common, but not regular. There were no illnesses while pregnant. During pregnancy, all check-ups were done on time. But she had surgery for appendicitis just before her pregnancy. She was engaged with the construction of her own house and was busy doing a lot of heavy work during pregnancy. There were no accidents at that time. Childbirth was normal delivery.

#### **Personal**

In early child hood the food habit of the child was regular but he used to take as much as food that is given. He was naughty but has sharing character.



### **Health conditions**

He was healthy at the time of his birth and weighed more than three kilograms (3.450Kg). The child was vaccinated at the right time. He had nutritious food and during early childhood he was easily affected by fever, cough, and common cold. He has once suffered from jaundice also. His father has memory loss to some extent.

### **Child's habit**

He loves listening stories and songs when he is young. He loves storybooks. Parents often bought him story books. He likes drawing. After coming back from school, he used to play with neighborhood children, then he engages in study himself. He has good relationships with his friends. In early childhood his favourite toy was car and bike. But now he's more interested in playing football. He had previously participated in martial arts classes which fostered his mental and physical development. He is bonded with his parents and sisters. He loves father more than mother. When the child comes home, he will share with his mother what has happened in the class.

### **Participation in co-curricular activities**

He was an active participant in co-curricular activities but now he is not as much participating as before. He had won first prize in the sub-district competition in Mappilapattu, drawing, Action Song and Colouring. He attends an annual program in the counselling center at University of Calicut.

### **Academic**

The child expresses interest in studying, but easily forgets what has learnt. The teacher had mentioned to his parents about his learning disabilities when he was backward in Mathematics. It was only then that they began to notice his learning disabilities. He is confused with writing during dictation. When he writes, the letters and symbols get moved back and forth. While copying from the books, he does not face any difficulties. He requires more time to read sentences perfectly. He attends the Abacus class at the school. All his teachers are of the opinion that he is trying to learn but he is not able to learn properly. He was very backward in his studies when he was in pre-school education. His progress in learning began after his enrolment in the school.

### **Counselling details**

He was taken to the Counselling Centre of the Calicut University by the direction of the Thirurangadi BRC. Classes are provided in the counselling centre individually. After counselling, parents observed a lot of change in him. The child's performance has increased compared to previous. He does not hesitate to go to counselling and learn everything.

### **Social support**

He approaches other students to learn what he does not know. He is assisted by his sisters and mother in his learning.

## **Document Analysis**

### **From School**

His academic performance went down up to second standard. After second standard, the academic performance is slowly increasing. He got average marks in Mathematics, very poor in Hindi and below average marks in other subjects. His handwriting is not good, and he makes a lot of mistakes while reading.

### **From CDMRP**

He is a dyslexic student. His intelligence score on the MISIC is 90. It shows he is an average intelligent student.

## **Individual Testing**

The test score on Raven's Coloured Progressive Matrices is 27 out of 36. It denotes an average intelligence. Investigator helped him to understand some questions. He took 32 minutes to complete the test.

## **Case III**

A 12 year old boy studying in fifth standard in an unaided U. P. School in Malappuram district of Kerala, identified as a student with dysgraphia by CDMRP. He belongs to Thenipalam Grama Panchayath and his family includes father, mother, sister and a brother.

## **Data through Observation**

### **Personal**

He comes to school very early and he has no hesitation to come into school. He never goes out after reaching in class. He attends school prayer with discipline and after the prayer, he sits in his own seat. He does not make great noise in the class. He does not go out and run or play outside at the time of interval. As soon as the bell rang, he did not get into the class. When the teacher comes in, he gets into his seat. He always sits in his own seat. He also tends to draw pictures, while all the students draw for leisure time. He washed his hands during lunch time and orderly ate the food which he brought from home. He is eating very slowly and some food is left in the dish. He cleans the waste on the floor and cleans his dish properly. After washing he places the dish in his bag. He carries everything in his bag when he leaves school, and prepares to go home. The child walks out disciplined when he leaves school.

### **Social**

He does not tease or harm other children. He engages in little games. He does not argue or quarrel with others. Other children do not consider him seriously. He too does not try to join others. During the time interval, he enjoys playing small games with other children in class till the teacher comes in.

### **Academic**

When the teacher came to class all the other children took their books and opened them. Only after he had been told to take the books and open them, did he

take the book. He had come to class without doing the homework given the day before. When the teacher asks for the reason, he says small reasons which are not taken into account. The handwriting in his books is bad He does not pay attention to the teacher taking the class and to the black board .The child actually listens to the back benches and other kids. Teachers are also unhappy with his certain behaviour. The child neither writes nor notes anything from the class. The teachers are not keen on him and didn't check his work properly. Occasionally, he listens to the class only when the teachers ask questions. During class time, he would often play with a box in his hand or paint something with a pen. When the class is about to end, he asks the teacher to put the book away. He was very late to get the book out of the bag. When the teacher tells everyone to write down what's on the board, they don't write. He was copied when the teacher told him to write. The child copies from others in the time of dictation. The child can be copied to look at it once and can copy all. He plays back and forth in class every time, and participates in several other activities. When the teacher asks the child to write, he does not write but turn the pages. Similarly, he does not write down the notes required for homework. Only when the teachers seem to take care of him, he is too concerned with learning activities.

**Interview (with the child)**

**Academic**

He likes the English subject and is very poor in Malayalam. He is very slow in writing in all subjects, and is very weak in reading.

### **Personal**

He wakes up only when somebody calls him, and does his routine activities by himself. He takes bath when somebody compels him. He washes his clothes himself but it is monitored by his mother. He wears the dress himself when emergency. He is not doing any other jobs in his home. His favourite food is Poratta and Beef, but it gets only once or twice in a month. He likes to travel, but gets chance rarely.

### **Social support**

Teachers help him a lot to improve his studies. Peers help him only when he requests. His mother helps him only during exams. The counselling class is more helpful to him. Since his house is close to school, someone in the house or relatives take him to school and take him back.

### **Interview (with teacher)**

#### **Academic**

He is a below average student. Teacher says that he shows a lot of improvements in the academic area day by day. Still his performance in the academic area is below average. He not attends the class properly and listens the class on special attention by teachers. He often will not do his homework from home. He regularly attends the class without any hesitation. He is very punctual in attending class.

### **Social**

He always complains about other students. He maintains good relationships with all teachers and students.

### **Social support**

Teachers conduct individual classes for him in order to enhance his learning capabilities and ICT in cooperation with the class. Other children consider him and help him according to his small needs. The parents take care of his studies, but not well with it.

### **Co-curricular activities**

He did not participate in co-curricular activities. He has tried to draw pictures in his books.

### **Interview (with parents)**

#### **Parental status**

The mother completed eighth and father completed the tenth standard of schooling. His mother is an Asha worker and father is labourer. His mother was 22 and his father was 31 when they get married, they are distant relatives. His father's family consists of highly educated people.

#### **Pre-natal, natal and post natal Details**

The mother was 34 years old at the time of her pregnancy. During pregnancy, all check-ups were on time. The child was the fourth child. Before

pregnancy his mother ate food that are common, eating was poor during pregnancy, didn't eat often at night and mother's sleep was poor at night. The mother was very sad when she was pregnant due to the death of a significant family member. She did not do any heavy work and there were no accidents at that time. The delivery was normal.

### **Personal**

Earlier he ate foods that were common and he ate nutritious food in adequate quantities. If they give him food on time, he will eat properly. He was too lazy to do school work. He often has quarrels with his younger sister. He is very friendly with other neighbourhood children.

### **Health conditions**

The weight of the child was 2.400 kg. The child was vaccinated at the right time. He was not sick at the time of his birth. He was late to talk and walk.

### **Child's habit**

He loves to listen to stories and songs when he was a baby. He loves story books also. It is a routine to listen, not to read on its own. The child was very interested in nursery hours and he attends regularly without any hesitation. At earlier times his favourite toy was JCB and lorry, but now he's more interested in playing football. When he leaves school, he regularly plays with the children at home.



### **Participation in Co-curricular activities**

He did not participate at the school's art festival, but he has participated in sports events and has not received any prize.

### **Academic**

He experiences difficulty on every subject, not just one subject in particular. The teacher made himself understand the child's difficulties. When his mother asks him to do homework, he lies down without doing homework. There was progress in his studies.

### **Counselling details**

The child has been going to counselling for about a year. It was his mother who sent him to counselling. Classes are provided in the counselling center as a teacher to a child, thereby it induced lots of change in him. The child is showing progress. He was keen to do all the work that the counselling center gave.

### **Social support**

His sisters take care of his studies. Peers help him very rarely. His teachers are supportive and they care for him very well. Earlier, when he was studying in another school, his academic matters were poor. Now he gets excellent support and care from the school and his academic performance has increased. Counselling also helps him a lot.

## **Document Analysis**

### **From school**

His academic performance was too low at first standard. Gradually the academic performance has increased. He got A grade in Hindi, Social science, I.T and below average marks in other subjects. He got A grade in work experience, Art education and Physical-health education. His notebook has some pictures he has drawn. He writes the notes badly. His handwriting is not good, he makes a lot of mistakes in writing.

### **From CDMRP**

He is a dyslexic student. His intelligence score on the MISIC test is 90. It shows he is an average intelligent student.

## **Individual Testing**

The test score on Raven's Coloured Progressive Matrices is 26 out of 36. He is of average intelligence. Investigator helped him with some questions. He took 30 minutes to complete the test.

## **Case IV**

A 10 year old boy studying in fourth standard in an aided U. P. School in Malappuram district of Kerala, identified as a student with dyslexia by CDMRP. He belongs to Pallikkal Grama Panchayath and his family includes father, mother, elder sister, brother, grandfather and grandmother

## **Data through Observation**

### **Personal**

He was reluctant to attend the school but now is regular in attending the school. He comes to school by bus. He has no habit of wandering in the veranda. He is very quiet and calm in the class. During interval time he didn't go outside the class. During lunch he stood in line for the food and bought it but he eats food without curry. He used to eat his food orderly. Instead of curry, pickles were added to the meal. He is eating very slowly and some food is left in the dish. He cleans the waste on the floor and cleans his dish properly. After washing, he placed the dish in his bag. When he leaves school, he goes disciplined to the bus.

### **Social**

He doesn't mingle with other students but when there is a need, he interacts with them. He does not quarrel with others or fight with others. When teachers come to the class, he treats them with respect. Most of the time, he is alone.

### **Academic**

He listens well in class. When the teacher asks a question, he tries to answer the question, but it takes the teacher's help to reach at the correct answer. When he answers, he shows no fear or joy. But he becomes happy after answering the questions. He does not talk to other children during the class. He doesn't laugh too much for the jokes in class. Before teacher asking to read a passage, he tries in his own way to read and comprehend the portion. He was unable to read properly because of stage fear. But he became happy after reading the passage. He needs help

and encouragement from the teacher because he has difficulty in reading. While reading he usually uses his forefinger. His books kept neatly, average handwriting and space arrangement in the book is systematic. In group works, he does the task by himself without sharing with others. The teacher gives the task of finding answers from the newspapers. Synchronization in the group was limited.

### **Co-curricular activities**

He is not ready to sing individually, but with other student he sings very well.

### **Interview (with child)**

#### **Personal**

He does all his daily routine himself such as brushing, bathing, having food, washing etc. He helps his mother by cleaning dishes and rooms. He wakes up early in the morning by himself. His favourite food is ghee rice and chicken. He likes to travel. He travels twice a year.

#### **Academic**

English is the most difficult subject for him. The child faces reading difficulty.

#### **Social support**

His teacher is very supportive. He receives individual attention from the class teacher. Doubts were cleared by his sisters and his brother didn't help him well. Often Parents take care of his studies. He perceives that his peers are not supportive.

**Interview (with teachers)**

**Academic**

The teacher says that the student's performance in academic activities is below average. He can do all daily tasks without any difficulty. But in learning activities he faces difficulties. But in an average, he is not the lowest one in the class. He answers all the questions accurately though he has taken some time off, he is still trying to learn. He regularly attends the class, without any hesitation. Mathematics teacher says he finds it difficult to calculate, but by using his fingers he is good in mathematical calculations. According to all his teachers, every day he gets better. Continued counselling can also be of great help in improving learning progress.

**Social**

He shows respect for all teachers and he behaves well and obeys them properly. He always acts very friendly with his peers and never quarrels with other students. He rarely complains about other students. No mischievous behaviour is found in him.

**Social support**

When the teacher told to study at home, he failed to understand what to learn. The teacher gives him small portions to study and he learns the portion readily. Teacher has asked other children to support him and other students help him learn the right way. Father focuses on his studies very well.

### **Co-curricular activities**

He is very good at co-curricular activities. He participated in the race and the long jump and won prize. He also sang and won the prize at the art festival. He also participates in madrasa art festival.

### **Interview (with parent)**

#### **Parental status**

The mother and father completed tenth standard. His mother is a housewife and father is a shopkeeper. His mother was 17 and his father was 25 when they get married. They live in a joint family.

#### **Pre natal, natal and post natal details**

The mother was 29 years old at the time of her pregnancy. During pregnancy, all check-ups were done on time. He was their 3rd child. During pregnancy, the mother's diet was common including fish and vegetables. The Blood pressure was high during pregnancy and the baby had a pre mature birth and the delivery was normal. There was no heavy work other than household work. Also there was no accident.

#### **Personal**

The child has some adjustment problem with the rest in the family.

#### **Health conditions**

During pregnancy, there was no illness other than Blood pressure. She was healthy before and after delivery. The weight of the child was 1.498 kg. The child

was vaccinated at the right time. He was not sick at the time of his birth. Due to early birth, the child was under intensive care for 15 days.

### **Child's habit**

He would eat whatever given him, never said no. He often takes food and eats it himself. His favourite food is ghee rice and biryani. The child would eat on time. In his leisure time, he enjoys playing. He loves to listen to stories and songs. He loves storybooks. At early child hood his favourite toy was vehicles and animals. He keeps the toys safe. When the child comes home, he will share with his mother what has happened in the class.

### **Participation in co-curricular activities**

He participates in the madrasa arts programme but did not participate in school programmes.

### **Academic**

He faces difficulty in reading. While reading, he usually reads in a slower manner. When he writes, he loses signs and some letters and he also faces difficulty to write. He is afraid of the subject English.

### **Counselling details**

The parents noticed his learning problems and sent him to a counselling centre. He was transferred to the current school due to lack of teacher's attention in the school he had attended. He was able to raise his standard of learning as the result

of counselling. The trainees were trained by play activities and through reading newspaper cutting.

### **Social support**

He learns from home only when he is ready to learn, but will not learn by the compulsion of others. All the homework he knows will be done from the school. If he doesn't know, he will come home and ask for it to his mother.

### **Document Analysis**

#### **From School**

Academic performance was very poor up to third standard, but now he shows progress in his academic performance. He got above average marks in Malayalam, Arabic, Environmental science and below average marks in English and Mathematics. His handwriting is somewhat good but he makes some mistakes while writing.

#### **From CDMRP**

He is a student with dyslexia. His intelligence score on the MISIC is 102. It shows he is an average intelligent student.

### **Individual Testing**

The test score on Raven's Coloured Progressive Matrices is 29 out of 36. It is average intelligence. Investigator helped him to understand some questions. 36 questions were answered in 25 minutes.



## **Case V**

A 9 year old boy studying in third standard in an aided U. P. School in Malappuram district of Kerala, identified as a student with dyslexia by CDMRP. He belongs to Pallikkal Grama Panchayath and his family includes father, mother, brother and a sister. He is undergoing counseling for learning disability.

### **Data through observation**

#### **Personal**

He comes to school by walking. He didn't wander outside the classroom after he reached the class. He is generally quiet in the class and always sits in his own seat. When the teacher enters the classroom he picks up the book and puts it out on the bench himself. He stands randomly in line for food. His eating habit is not good and he wastes a lot of food. He cleans the waste on the floor and cleans his dish properly. The pictures of animals and vehicles are drawn in his notebook. He didn't care about the time to leave school. As soon as the bell rang he put the study materials in the bag and goes home.

#### **Social**

He is not interacting with his friends. He always tries to sit alone. He shows a respectful attitude towards his teachers. In group activities, other children did not help him.

#### **Academic**

He attends classes regularly but is a passive listener in the class. He is not responding to the questions asked by the teacher during class time. When the teacher

tells him to read he looks to the book, but not reading. He draws well in the book and his hand writing is fantastic. He is careless and he cannot answer questions properly. During class time he was often talking to his friends and he is not listening to the teacher. He reads with mass reading. He is not taking part in class group activities and he is not copying the points from other group members.

### **Interview (with the child)**

#### **Personal**

He wakes up early in the morning by himself. After finishing his daily routines he goes to madrasa. His favourite food is biriyani and chicken. He likes to travel. He sometimes travels with his family. He washes clothes himself. He helps his mother by cleaning dishes and rooms.

#### **Academic**

Arabic is the most difficult subject for him. The child faces reading difficulty.

#### **Social support**

Teachers are very helpful in his studies. Mother cannot spend more time with the case in clearing his doubts related to school works, because she needs to spend more time with small baby and his brother helps him when he is free. Child's father takes care of his studies rarely. His peers did not care and are not helpful.

**Interview (with teacher)**

**Academic**

He is regular in the class. The teacher says the student's performance in academic activities is below average. Teacher often observes him writing slowly during class activities.

**Social**

He is a student who shows respect towards teachers but interaction with other students is rare.

**Social support**

The teacher gives him small portions of content to learn from home and reinforces him properly. Teachers feel that their approach is adequate for him. Other students are asked to support him in his learning. The irresponsible attitude of the parents is reported as the main reason behind the poor performance of the child.

**Co-curricular activities**

He has the talent of drawing, but he does not participate in any kind of arts and sports programmes.

**Interview (with parents)**

**Parental status**

The child's mother completed 12th and father completed the tenth standard of schooling. His mother is a housewife and father is a painter. His mother was 21

and his father was 26 when they married. His mother's family consists of highly educated people.

### **Pre natal, natal and post natal details**

The mother was 26 years old at the time of her pregnancy. During pregnancy, all check-ups were done on time. He is their 2nd child. The food habit was regular during pregnancy and after delivery. There was no complication at any stage of pregnancy. The childbirth was normal.

### **Personal**

He had nutritious food in adequate quantities during early childhood. He takes enough food in time.

### **Health conditions**

The weight of the child was 3.200 kg. After the delivery mother was healthy. The child was vaccinated at the right time. In early childhood he was affected by fever, common cold, and cough.

### **Child's habit**

His eating was minimal. Dosa and Idli are his favourite food. He will eat only if cooked according to his will. They take only hot foods. He is vigilant for everything. He was compelled to bath in hot water. He loves to listen to stories and songs. He loves story books too. The child often quarrels with his brother, but he and his sister are in friendly hands. He will sleep early at night. His favourite toy was vehicles such as cars and bikes. When the child comes home, he won't tell his

mom anything about what has happened in the school. He maintains good relationships with neighborhood children and shares everything with them. He behaves lovingly with his family members.

### **Participation in co-curricular activities**

He always spent time on music. He sings songs in madrasa. The child is very interested in drawing also, but he is not participating in programmes at school.

### **Academic**

He attended kindergarten. He will be doing his homework from school as much as possible, will not do work at home. His study time at home is very short. He faces difficulty in reading, rather than writing. He is very well in mathematics.

### **Counselling details**

It was only when the parents were involved in his studies then they realized his difficulties in learning. At second standard, he attended counselling, but not continuing. Counselling could make a lot of changes in him. He was trained to do some activities during counseling session, so he was interested to attend the counselling.

### **Social support**

His teacher supports him very well, he obeys the teacher's instructions sincerely. Mother tries to help him always, he avoids mother's help. His peers did not support in his studies from school but he is an active member in the group of neighborhood children.

## **Document Analysis**

### **From School**

Academic performance was increasing. He got above average marks in Malayalam, Mathematics, and Environmental science and below average marks in English and Arabic. His handwriting is good and his books are kept neatly.

### **From CDMRP**

He is a dyslexic student. His intelligence score on the MISIC is 104. It shows he is an average intelligent student.

### **Individual Testing**

The test score on Raven's Coloured Progressive Matrices is 28 out of 36. It is average intelligence. Investigator helped him to understand some questions. 36 questions were answered in 35 minutes.

As the second step the coded data are grouped together and presented in a table as table 2

Table 2

*The data collected through different techniques about the cases coded together to form chunks.*

Case Categories	CASE I	CASE II	CASE III	CASE IV	CASE V
Learning Disability and intelligence	Dysgraphia. MISIC: Average CPM: Above average	Dyslexia. MISIC: Average CPM: Average	Dysgraphia. MISIC: Average CPM: Average	Dyslexia. MISIC: Average CPM: Average	Dyslexia. MISIC: Average CPM: Average
Personal	Regular in class. Does all his daily routines himself	Regular in class. Does all his daily routines himself	Regular in class. Does all his daily routines himself but when forced by others.	Regular in class, Does all his daily routines himself	Regular in class. Does all his daily routines himself
Academic	Average performance. Hindi most preferred subject, English and Social science difficult subjects	Below average performance. in all subjects	Below average performance in all subjects.	Below average performance in all subjects	Below average performance in all subjects. Likes mathematics. Good handwriting
Co-curricular activities	Not participating in any of the co-curricular programmes.	Participates and have won prize at sub district level.	Participation in sports events only.	Participates in arts and sports.	Not participating in any of the programmes at school.
Social Behaviour	Very friendly to all students and teachers.	Respecting teachers but not interacting with peers.	Good relationship with teachers and other students.	Rarely interacts with peers. Respects the teachers.	Does not interact with peers. Respecting teachers
Social Support	Receives support from family and teachers. Peers accept him.	Receives support from teachers and mother. Peers help him rarely.	Support from teachers and mother. Peers help only on requesting.	Individual attention given by teacher, greater support by sister. Peers are not supportive	Greater support from teachers and rare support from Family and peers rarely.

Health Conditions	Good in health. An accident caused head injury	In early childhood easily affected by fever, common cold, and cough.	Healthy. Delay to walk and speak.	Healthy. Pre mature birth.	In early childhood easily affected by fever, common cold, and cough.
Parental Status	School education: Both completed 10 <sup>th</sup> standard. Work: Father: Abroad Mother: Housewife.	School education: Father:4 <sup>th</sup> Mother:10 <sup>th</sup> Work:- Father: Labourer Mother: Housewife.	School education: Father:10 <sup>th</sup> Mother: 8 <sup>th</sup> Work:- Father: Labourer Mother: Asha worker	School education: Both completed 10 <sup>th</sup> standard. Work:- Father: Shopkeeper. Mother: Housewife.	School education:- Father:10 <sup>th</sup> Mother:12 <sup>th</sup> Work:- Father: Painter Mother: Housewife.
Child's Interest	Food: Shavarma Likes travelling, Toys: Vehicles, Loves stories.	Food: Milk and Idly. Likes travelling, Toys: Vehicles, Loves stories.	Food: Poratta and beef. Likes travelling, Toys: Vehicles, Loves stories.	Food: Ghee rice and chicken. Likes travelling, Toys :Vehicles, Loves stories.	Food: Biryani and chicken. Likes travelling, Toys :Vehicles, Loves stories.
Pre-natal, natal and post natal details	No special illness Delivery was normal. Vaccinations are on time. Weight: 3.05kg	No special illness, Normal delivery. Vaccinations are on time. Weight: 3.45kg	No special illness, Delivery was normal. Vaccinations are on time. Weight: 2.40kg	B.P was high, Normal delivery, early birth. Vaccinations are on time. Weight: 1.498kg	No complications at any stage of pregnancy. Normal delivery. Vaccinations are on time. Weight:3.2kg

The consolidated data were then interpreted based on the research questions.

Each research question with interpretation of data are given below

The first research question is '**What is the level of intellectual ability of the selected children with learning disability?**' with sub questions



- a) What is the nature of learning disability of the case?
- b) Whether the child with learning disability has normal level of intelligence measured using Raven's coloured progressive matrices and MISIC (Malins Intelligence Scale for Indian Children).

All the five cases selected for the study are of single learning disability as identified by CDMRP, University of Calicut. Three cases out of 5 are dyslexic and two are dysgraphic. That is three cases are having difficulty in reading and two are having difficulty in writing.

Analysis of the cases revealed that the selected students with dysgraphia and dyslexia are having average level of intelligence measured through MISIC and RCM, except a case with dysgraphia. A student with dysgraphia is reported to have above average intelligence measured through RCM as per grade norms.

The second research question is '**What is the personal and familial background of the selected children with learning disability?**' with sub questions

- c) What is the socio economic status of the family of the child with learning disability?
- d) Whether the child with learning disability has a normal developmental history?

The socio economic status of the family of each case is found to be almost average. The parental education is at school level for all the cases. Only in one case the mother is reported to have higher secondary education. Mothers of all cases

except one are house wives and for one case mother is working as Asha worker. Fathers of a case is working abroad as skilled labourer whereas fathers of other cases are skilled labourers/shopkeeper at their native place. The economic status of all cases is not high.

The personal development of the cases is found to be normal, with proper vaccination, nutritious food and parental attention. In one case of dyslexia the child is having a pre mature birth, with low weight and under intensive care unit for some period. A case on dysgraphia is reported to be slow in developmental tasks like walking and speaking. One student with dysgraphia had a head injury. Except in one case, all have normal birth. Mothers of all cases had enough rest, nutritious food and medical care during their pregnancy. Parents of these cases are married at an early age itself and no late marriage is reported. The parents of one case with dysgraphia are blood related.

The third research question '**How do the children with learning disability perceive themselves and social support they receive?**'

- a) How did the child with learning disability perceive himself?
- b) How does the child with learning disability perceive the classroom, teachers and the subject?
- c) How does the child with learning disability perform in various subject areas?
- d) How does the child with learning disability perceive the social support he/she receives?

The cases selected with dyslexia and dysgraphia are found to be thinking about themselves as doing their own routine works, helping in family households (except one) and are interested in learning. Except one student, all others are weak in all the subjects, one case with dysgraphia is found to be above average in Hindi. Observation and interview with teachers revealed that these students are having abilities in co-curricular activities like drawing and singing, but not ready to participate in the programmes at school. Three cases are found to be interested in arts/ sports but one with dysgraphia and one with dyslexia are found to be not at all participating in any of the co-curricular activities. All the cases are reported to be interested in hearing stories but not reading them.

All the cases are found to be fond of their classroom, their teachers and peers. Their responses revealed that they are liked by other students and teachers give special attention to them. They rate their performance with respect to the marks obtained in exam and not their interest or capability to learn the subject. Some students found difficulty in languages but in science and mathematics they are not much confident. As per the responses of teachers and parents, all the selected cases are below average in almost all subjects except one with dysgraphia. Their study habits are different and one student is not ready to study from home, most of the selected cases do not discuss the school matters with parents at home.

The selected cases, on observation and interview with teachers, are found to be introverts, except one. They are not going outside the class room even in the leisure time, less interacting with other students and less participating in the group activities. Two students are found to be hyperactive in the class.

These students feel that they get enough support for learning from their peers. They are satisfied with the peer behavior, but as per teachers' responses except one student who is an introvert, all other students complain frequently about other students. Except in the case of one student, parents and other family members are supporting these students in learning process, all these students are identified to have learning disability by the teachers and send to counseling by their initiative. But in the case of one student with dyslexia, though counseling was started, it is not continued. In each case, teachers are giving individual support and divide the content into small parts and help them to master the content.

### **Conclusion**

Students with learning disabilities Dysgraphia (2 students) and Dyslexia (3 students) were studied in detail and the data collected were analyzed as suggested by Atkinson (2002). The common characteristics observed among these children are that they are of average intelligence (MISIC), they respect teachers, they love to hear stories, but not to read and feel that teachers are supporting them. Proper care and attention received during pre natal, natal and post natal period. Their learning difficulty was identified by teachers and send for counseling.

With one or two exceptional cases, the common features are that they are below average performers in almost all subjects, introverts, and having talents in non-academic areas. They perceive that family and peers are helping them to learn. The developments in early childhood are normal (except one), and no serious illness or accidents (except one case).

Parents of these students are not highly educated and belong to an average socio economic status. All the students (except one) get support from parents and family members in learning and continue counseling. They are of the belief that they can learn better with the support they receive from the teachers, family, peers and the counsellors.

## **SUMMARY, CONCLUSION AND SUGGESTIONS**

This chapter includes an overview of the study's significant aspects like major findings, educational implications and suggestions for further research in the area.

### **Restatement of the Problem**

The present study is entitled as "**A CASE STUDY ON PRIMARY SCHOOL STUDENTS WITH LEARNING DISABILITY**"

### **Research questions**

The following are the research questions set for the study

1. What is the level of intellectual ability of the selected children with learning disability?
  - a) What is the nature of learning disability of the case?
  - b) Whether the child with learning disability has normal level of intelligence measured using Raven's coloured progressive matrices and MISIC (Malins Intelligence Scale for Indian Children).
2. What is the personal and familial background of the selected children with learning disability?
  - a) What is the socio economic status of the family of the child with learning disability?

- b) Whether the child with learning disability has a normal developmental history?
3. How do the children with learning disability perceive themselves and social support they receive?
- a) How did the child with learning disability perceive himself?
  - b) How does the child with learning disability perceive classroom, teachers and the subject?
  - c) How does the child with learning disability perform in various subject areas?
  - d) How does the child with learning disability perceive the social support he/she receives?

### **Objectives**

The objectives of the study are

1. To analyse the intellectual ability of the selected children with Learning Disability.
2. To analyse the personal and familial background of the selected children with Learning Disability
3. To know the perception of the select cases about themselves and the social support they receive.

### **Instruments used**

The investigator used the following methods to collect data for the present study.

1. Non-participant observation of the children with an observation schedule to observe the child's behaviour and approaches inside the classroom, outside the classroom with peers and teachers.
2. Scheduled interview with parent, teachers and child in order to collect personal details, academic details, health related information, details during the pregnancy period of the mother, family details etc. of the participants.
3. Document analysis was used to get more details about the academic performance and progress of the cases.
4. Raven's Coloured Progressive Matrices was used to get intelligence score of the cases.
5. Malin's intelligence scale for Indian children (MISIC) to assess the intelligence of the cases.(secondary data)

### **Major Findings**

Major findings as the result of studying the five cases are given below.

1. Students with one type of learning disability shows symptoms of learning difficulty in other areas too. Students with dysgraphia reported difficulty in reading and cases with dyslexia showed difficulty in writing, both have difficulty in doing mathematics.



2. The cases under study, except one, showed introvert behaviour with varying degrees in the school and classrooms but are active members of the group in their neighbourhood. The cases under study (except one) are not ready to interact with their academic peers, may be due to their feeling of LD they have, but are actively participating in games with the children in the neighbourhood who are not aware of their LD.
3. The cases studied respect teachers and have good relationship with them, appreciate the effort the teachers are taking to make them learn. Studies show that good relationship between teachers and children with LD becomes stronger when the teachers are successful in catering the special needs they have. So the teachers of the cases studied may be considered as attending their needs satisfactorily.
4. The study have found that all the cases are having average level of intelligence, in some cases, even above average, that reiterates the definition of students with learning disability.
5. The children with dysgraphia and dyslexia who were undergone detailed study are confident about their ability to learn and to do their day to day activities independently but some of them are reluctant to participate in co-curricular activities in the school, though they are participating in programmes outside the school.
6. The students with dyslexia and dysgraphia are found to like listening stories, but not reading stories. They love travelling, favourite toys being vehicles

(all the cases were boys) and these children are engaging in games in their local groups.

7. The students under this case study are found to be satisfied with the support they get from parents and teachers but in some cases not from peers. Though inclusive education is being practiced in our schools for decades, the learners with LD are not getting enough support from their peers.
8. The socio economic status of the families of the cases under study is average, with parents having only school level education but they are aware of their wards LD and the need for counselling and the support they have to give the child. There is no indication of cultural, economic or social influence on LD of the selected cases.
9. The cases are found to be healthy without any diseases and having timely vaccination. No serious hazards are reported in the case of these children except for one with head injury. The development history of the cases studied is normal except one who had a lagging in the task of walking and speaking.
10. All the cases under study are found to be regular in school, without any noticeable mischievous behaviour.
11. Children with LD and their parents are having positive attitude towards counseling and the school. But the cognitive engagement of many students with LD in the school is not satisfactory.

12. Academic interests of children with LD are different in different cases. Child with dysgraphia is reported as above average in Hindi, at the same time, Arabic is found to be the most difficult subject by another one.

### **Educational Implications**

The study found that students with a particular LD are weak in learning the other subjects too. They have difficulty in reading, writing and arithmetic with varying degrees. So it is essential that the teachers must collectively attend the student needs. There should be collaboration with other teachers and various techniques and methods must be experimented to find out the better approach for the specific learner. Attempts like learning through arts, problem based contextual learning may improve the engagement of students in academic activities.

The feeling of backwardness may make the students keep away from their peers and later may affect their personality. Such students will become more vulnerable to mischievous groups, drugs and other anti-social behaviours. So teachers and parents must take proper care to improve their performance together with increasing their confidence and esteem. This can be achieved by making the content more diluted for such students and through repeated practices. In this era of technology, more experiences to the children can be given easily with the use of various technologies to make the learning more meaningful.

The practice of inclusive education will be successful if other children accept the students with LD, which is not happening in many cases. Attending counseling programmes is also considered as shameful by many. More conscientisation

programmes on learning disability and the need for proper counseling must be organized for parents, students and teachers.

For the development of children with learning disability continuous support from teachers and parents is essential and it should be ensured. Such students must be motivated to participate in co - curricular activities, so that they can overcome their deficiencies in some areas. It will help them to improve their confidence and self - esteem.

The teachers are best detectors of LD among children and therefore a detailed course on various learning difficulties may be included in the teacher training/teacher education programmes.

### **Suggestions for Further Study**

1. The study was conducted on students with dyslexia and dysgraphia, it can be replicated by including cases of dyscalculia too.
2. The study was conducted in Malappuram district and particularly in Vengara educational district, with male students as participants. The study can be replicated on a wider sample including girls too.
3. Multiple learning disability is a more severe situation and a detailed study can be conducted on students with multiple LD.
4. A more detailed study; preferably a longitudinal study may be conducted on students with LD.

5. An analytical study of the achievements and constraints faced by individuals with LD may be conducted.

### **Conclusion**

The present study is a multiple case study of five primary school children with learning disability identified by authority. Of these, three cases are with dyslexia and two are with dysgraphia. They are average or above average in intelligence tested by MISIC and CPM. The study has tried to reveal the major aspects like personal, social, developmental and familial of the cases selected for the study. The cases identified satisfy the conditions in definition of learning disability like average/ above average intelligence and absence of any cultural, economic, social influences.

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## Appendix A

### Observation Schedule

1. സ്കൂളിൽ കുട്ടി വരുന്ന സമയം
2. സ്കൂളിൽ എത്തിയാൽ കുട്ടിയുടെ പ്രവർത്തനം
3. മറ്റു കുട്ടികളുമായുള്ള കൂട്ട്
4. കുട്ടി കളിക്കുന്ന കളികൾ
5. ആരുടെ കൂടെ കളിക്കുന്നു
6. കുട്ടിയുടെ അച്ചടക്കം
7. ക്ലാസിൽ ഇരിക്കുന്ന സ്ഥാനം
8. അധ്യാപകരോടുള്ള കുട്ടിയുടെ പെരുമാറ്റം
9. ക്ലാസ്സിൽ കുട്ടിയുടെ ശ്രദ്ധ
10. ക്ലാസ് പ്രവർത്തനങ്ങളിൽ കുട്ടിയുടെ പങ്കാളിത്തം
11. പ്രവർത്തനങ്ങളിൽ കുട്ടിയുടെ സമീപനം
12. അധ്യാപകന് കുട്ടിയിലുള്ള ശ്രദ്ധ എങ്ങനെയാണ്?
13. ക്ലാസ്സിലെ കുട്ടിയുടെ പ്രതികരണങ്ങൾ
14. അധ്യാപകന്റെ സഹായം
15. മറ്റു കുട്ടികളുടെ സഹായം
16. ഭക്ഷണ കാര്യങ്ങളിൽ കുട്ടിയുടെ പെരുമാറ്റം
17. ഭക്ഷണം കഴിക്കുന്ന രീതി
18. ഭക്ഷണാവശിഷ്ടങ്ങളും പാത്രവും വൃത്തിയാക്കുന്ന രീതി
19. ഒഴിവുസമയങ്ങളിൽ കുട്ടിയുടെ പ്രവർത്തനം
20. പുസ്തകങ്ങളും ബാഗും സൂക്ഷിക്കുന്ന രീതി
21. പുസ്തകങ്ങളിലും എഴുത്തിലും ഉള്ള വൃത്തി

**Appendix B**  
**Interview Schedule for Child**

1. താങ്കൾക്ക് ഏറ്റവും പ്രയാസം അനുഭവപ്പെടുന്ന വിഷയം ഏത്?
2. ഏതെല്ലാം ബുദ്ധിമുട്ടുകളാണ് താങ്കൾ നേരിടുന്നത്?
3. പഠനപ്രവർത്തനങ്ങളിൽ ആരിൽ നിന്നെല്ലാം നിങ്ങൾക്ക് സഹായം ലഭിക്കുന്നു?
4. മാതാപിതാക്കൾ നിങ്ങളുടെ പഠനപ്രവർത്തനങ്ങളിൽ ഇടപെടാറുണ്ടോ?
5. ഉടെ ക്കിൽ ഏതെല്ലാം തരത്തിൽ?
6. താഴെപ്പറയുന്ന കാര്യങ്ങൾ ചെയ്യാറുണ്ടോ?   
വസ്ത്രം അലക്കൽ  മടക്കിവെക്കൽ  ധരിക്കൽ
7. വീട്ടിൽ അമ്മയെ സഹായിക്കാറുണ്ടോ?
8. ദിനചര്യകൾ ചെയ്യുന്നത്   
സ്വയം  മറ്റുള്ളവർ
9. നിങ്ങൾക്ക് ഇഷ്ടപ്പെട്ട ഭക്ഷണം ഏതെല്ലാം?
10. നിങ്ങൾക്ക് വിനോദയാത്ര പോവാൻ താല്പര്യമുണ്ടോ? ഉടെ ക്കിൽ എത്ര ഇടവിട്ട്?   
സ്ഥിരമായി  ഇടക്കിടക്ക്  വല്ലപ്പോഴും  തീരെ ഇല്ല
11. സ്കൂളിൽ പോകുന്നതും തിരിച്ചു വരുന്നതും.   
സ്വയം വാഹനം  കുട്ടുകാരോടൊപ്പം   
രക്ഷിതാവിനോടൊപ്പം



## Appendix C

### INTERVIEW SCHEDULE FOR TEACHER

1. പഠന പ്രവർത്തനങ്ങളിൽ കുട്ടിയുടെ പ്രകടനം എങ്ങനെയാണ്?
2. പാഠ്യേതര പ്രവർത്തനങ്ങളിൽ കുട്ടിയുടെ പങ്കാളിത്തം എങ്ങനെയാണ്?
3. മറ്റുള്ള കുട്ടികളുമായി ഇവന്റെ/ഇവളുടെ പെരുമാറ്റം എങ്ങനെയാണ്?
4. അധ്യാപകരുമായി ഇവന്റെ/ഇവളുടെ പെരുമാറ്റം എങ്ങനെയാണ്?
5. ക്ലാസിലെ കുട്ടിയുടെ സ്ഥാനം എത്രയാണ്?
6. കുട്ടിയുടെ പഠനനിലവാരം മെച്ചപ്പെടുന്നുണ്ടോ?
7. ഏതൊക്കെ രീതിയിലാണ് ക്ലാസെടുക്കാറുള്ളത്?
8. മറ്റു കുട്ടികൾ ഈ കുട്ടിയെ പ്രത്യേകമായി പരിഗണിക്കാറുണ്ടോ?
9. രക്ഷിതാക്കൾ കുട്ടിയുടെ പഠനകാര്യങ്ങളിൽ ശ്രദ്ധിക്കാറുണ്ടോ?   
നിരന്തരം  ഇടയ്ക്കിടയ്ക്ക്  വല്ലപ്പോഴും  തീരെയില്ല
10. എന്നും ക്ലാസിൽ വരാറുണ്ടോ?
11. കൃത്യസമയത്ത് വരാറുണ്ടോ?

**Appendix D**  
**INTERVIEW SCHEDULE FOR PARENTS**

- അമ്മയുടെ പേര് :
- വിദ്യാഭ്യാസയോഗ്യത :
- തൊഴിൽ :
- അച്ഛന്റെ പേര് :
- വിദ്യാഭ്യാസ യോഗ്യത :
- തൊഴിൽ :
- താമസസ്ഥലം :
- വിവാഹിതരായ വയസ്സ് :
- ഗർഭധാരണ സമയത്ത് അമ്മയുടെ വയസ്സ് :
- കുട്ടിയുടെ വയസ്സ് :
- ജനനക്രമം :
- ജനനസമയത്ത് കുട്ടിയുടെ ഭാരം :

1. ഏത് വയസ്സിലാണ് വിവാഹിതയായത്?
2. കുടുംബ ബന്ധത്തിൽ നിന്നായിരുന്നോ വിവാഹം?
3. എത്രമാത്രം വയസ്സിലാണ് ഈ കുഞ്ഞിനെ ഗർഭം ധരിച്ചത്?
4. ഗർഭധാരണത്തിനുമുമ്പ് ഏതെല്ലാം തരം ഭക്ഷണമാണ് കഴിച്ചിരുന്നത്?
5. ഇഷ്ടഭക്ഷണം ഏതായിരുന്നു?
6. അന്ന് ഉറക്കം കൃത്യമായിരുന്നോ?
7. ഭക്ഷണക്രമം ശരിയായ രീതിയിലായിരുന്നോ?
8. ഗർഭകാലത്ത് സമയാസമയങ്ങളിൽ പരിചരണം ലഭിച്ചിരുന്നോ?
9. ഗർഭകാലത്ത് ഏതെല്ലാം തരം ഭക്ഷണമാണ് കഴിച്ചിരുന്നത്?
10. ഇഷ്ടപ്പെട്ട ഭക്ഷണം ഏതായിരുന്നു?
11. അന്ന് ഉറക്കം കൃത്യമായിരുന്നോ?
12. ഭക്ഷണക്രമം ശരിയായ രീതിയിലായിരുന്നോ?
13. ഗർഭകാലത്ത് നിങ്ങൾ സന്തോഷവതിയായിരുന്നോ?
14. ഗർഭകാലത്ത് നിങ്ങൾക്ക് എന്തെങ്കിലും അസുഖമുണ്ടായിരുന്നോ?

15. ഗർഭകാലത്ത് കുറിയായ ജോലികൾ ചെയ്തിരുന്നോ?
16. ആ കാലയളവിൽ എന്തെങ്കിലും അപകടങ്ങൾ സംഭവിച്ചിരുന്നോ?
17. പ്രസവം എങ്ങനെയുള്ളതായിരുന്നു.  
സുഖപ്രസവം  ശസ്ത്രക്രിയ
18. കുട്ടിക്ക് പ്രതിരോധ കുത്തിവെപ്പുകൾ യഥാസമയങ്ങളിൽ നൽകിയിരുന്നോ?
19. ജനനസമയത്ത് കുട്ടിയുടെ ആരോഗ്യനില തൃപ്തികരമായിരുന്നോ?
20. ഡോക്ടർ കുട്ടിയുടെ വളർച്ചയെ സംബന്ധിച്ചോ പഠനത്തെ സംബന്ധിച്ചോ എന്തെങ്കിലും അഭിപ്രായങ്ങൾ പറഞ്ഞിരുന്നോ?
21. പ്രസവശേഷം നിങ്ങളുടെ ആരോഗ്യനില തൃപ്തികരമായിരുന്നോ?
22. ജനനശേഷം ആദ്യകാലങ്ങളിൽ കുട്ടിയുടെ ഭക്ഷണക്രമം എങ്ങനെയായിരുന്നു?
23. കുട്ടിക്ക് പോഷകാഹാരങ്ങൾ നൽകിയിരുന്നോ?
24. കുട്ടിക്ക് ഏറ്റവും ഇഷ്ടപ്പെട്ട ഭക്ഷണം ഏതായിരുന്നു?
25. ഇഷ്ടഭക്ഷണം എത്ര ഇടവേളകളിലാണ് കഴിക്കാറുള്ളത്?
26. ആദ്യകാലങ്ങളിൽ കുട്ടിയുടെ ഉറക്കക്രമം എങ്ങനെയായിരുന്നു? ഇപ്പോൾ എങ്ങനെയാണ്.
27. ഇപ്പോൾ കുട്ടിയുടെ ഭക്ഷണക്രമം എങ്ങനെയാണ്?
28. സഹോദരങ്ങളുമായുള്ള ബന്ധം എങ്ങനെയാണ്?
29. ഇപ്പോഴത്തെ ഇഷ്ടഭക്ഷണം എന്താണ്?
30. എത്ര ഇടവിട്ടാണ് ഇഷ്ടഭക്ഷണം കഴിക്കുന്നത്?
31. ഇപ്പോൾ കുട്ടിയുടെ ഉറക്കം ശരിയായ ക്രമത്തിലാണോ?
32. ആദ്യകാലങ്ങളിൽ ശാരീരികമായോ മാനസികമായോ പ്രയാസങ്ങൾ നേരിട്ടിട്ടുണ്ടോ?
33. ആദ്യകാലങ്ങളിൽ അസുഖങ്ങൾ ഉണ്ടായിരുന്നോ?  
സ്ഥിരം  ഇടയ്ക്കിടെ  വല്ലപ്പോഴും
34. സമയാസമയങ്ങളിൽ ചികിത്സ നൽകാൻ സാധിച്ചിട്ടുണ്ടോ?
35. ചെറുപ്രായത്തിൽ കഥകളും പാട്ടുകളും കുട്ടിക്ക് ചൊല്ലിക്കൊടുക്കാറുണ്ടോ?
36. കുട്ടിക്ക് കഥാപുസ്തകങ്ങൾ വായിക്കുന്ന ശീലം ഉണ്ടായിരുന്നോ?
37. എന്തെല്ലാം കളിസാധനങ്ങളോടായിരുന്നു കുടുതൽ താൽപര്യം?
38. കുടുംബത്തിൽ ഉന്നത വിദ്യാഭ്യാസ യോഗ്യത ഉള്ളവർ ഉണ്ടോ? കുട്ടിയുമായുള്ള ബന്ധം?
39. കുടുംബത്തിൽ ഉദ്യോഗാർത്ഥികൾ ഉണ്ടോ? ഉണ്ടെങ്കിൽ കുട്ടിയുമായുള്ള ബന്ധം?
40. ഏതെങ്കിലും മേഖലയിൽ കുട്ടിയ്ക്ക് പ്രത്യേക കഴിവുകളുണ്ടോ?

## *Appendices*

41. ഏതെങ്കിലും പ്രയാസങ്ങൾ കൂട്ടി നേരിടേ 1 വരുമെന്ന് ആരെങ്കിലും അഭിപ്രായപ്പെട്ടിട്ടുണ്ടോ?
42. കൂട്ടി എന്തെങ്കിലും നേട്ടങ്ങൾ നേടിയിട്ടുണ്ടോ?
43. കൂട്ടിയുടെ പഠനകാര്യങ്ങളിൽ ഏതെങ്കിലും രീതിയിൽ ഇടപെടാറുണ്ടോ? അവ ഏതെല്ലാം?
44. കുടുംബാംഗങ്ങളുമായി കൂട്ടിയുടെ ഇടപെടൽ എങ്ങനെയുള്ളതാണ്?