



Designing for Children

- With focus on 'Play + Learn'

A qualitative study to create an assisting aid for parents and children with special learning needs

Shraddha Chadha, Uttar Pradesh Institute of Design, Noida, chadhashraddha@gmail.com

Girinath Gopinath, National Institute of Fashion Technology, Kannur,
girinath.gopinath@nift.ac.in

ABSTRACT

The term learning disability refers to a neurological disorder which is noticed in the processes not happening efficiently, related to perceiving, thinking, memorising, or learning involved in understanding spoken, written language, and performing tasks. This can be achieved by improving and adopting techniques other than the conventional methods, every child should be looked at with a fresh pair of eyes to help them sail through life, special education is one such tool helping child's development. The purpose of this descriptive study was to understand the challenges faced by children in the age group of 5-10 years with learning disability and how learning can be made friendlier for them. The research was conducted through participant observation with a group of 8-10 children under the Orkids Organisation. Conversations and activities were performed with the children to understand their perspectives better. Interviews and discussions with 5 professionals in the field were also conducted.

Key words: Learning Disability, Special Education, Collaborative Effort, Development, Assistive Aid

INTRODUCTION

Learning Disabilities are referred to a few conditions which may affect the acquiring, organizing, retaining, understanding the use of verbal or nonverbal information. The children, who otherwise show at least average abilities essential for thinking or reasoning.

Learning disabilities exist due to genetic or neurobiological factors or an injury that alters the functioning of the brain in a way that affects one or more processes which are incurable. These disorders are not due to factors like hearing or vision impairment, socio-economic factors, cultural or linguistic differences, lack of motivation or ineffective teaching. It is very important for them to receive collaborative efforts from their parents and others around.

The already conducted researches have collected data on how it has been affecting the students, measures in schools and how teachers can help the children. It also came to the notice how parents lack knowledge at times and are not able to pick out peculiar, early signs of learning difficulties that their child may be facing.

RESEARCH OBJECTIVES

- To understand the challenges faced by children in the age group of 5-10 years with learning disability and how learning can be made friendlier.
- To design learning aid with different mediums for children, laying focus on details.

REVIEW OF LITERATURE

Döhla D, Willmes K and Heim S (2018) discuss language and how it has evolved as a system for a spoken form of communication, implying that written language is a relatively new in the history of human existence. Reading and writing are complex tasks involving hierarchy of skills that must be grasped and subconsciously done to allow for fluent reading and written text.

Children begin by learning the letter formations, coding of sounds into alphabets, organization of alphabets into words, and finally the putting together of words into grammatically sound sentences. Beyond the sentence level, ideas must be introduced in a logical order and organized in paragraphs. Vandana Singhal, in her article, discusses language and acquisition of the second language. The signs and symbols are used in order to encode and decode the information available in a language. The first language learned by children since birth, is their mother tongue. Any other language learned or acquired throughout their life is considered to be the second language. It is easier for young children to learn a second language faster than an adult. Several factors are considered while teaching another language, these may include the language that they speak at home, willingness to learn, reason behind learning another language. According to an essay, UK (2018), There are many problems in reading that are faced by readers of a second

language. The problem could be due to a lack of interest in reading books of a language which the readers are not used to or familiar with, making it challenging for them.

Iqbal et al. (2015) study is based around the area of Pakistan. They discuss the factors that affect the comprehension of the second language of the students. The factors that they found to be responsible after their conducted tests and interviews were the poor command over the vocabulary, cramming the syllabus without focus on understanding, to pass the examinations and no interest shown in reading the text. This research is relevant to understand the problems children might face even when they do not have a learning disability.

The research done by Geske and Ozola (2008) suggests that the socio- economic position of a family also influences student's reading literacy achievements. Students reading literacy is considerably influenced by the participation of both parents and children. Tánczikné (2017), in her article, discusses the importance to communicate complex information, which created the need for language. The brain imaging techniques suggest that the brain can rearrange itself to be able to read in different languages. Even before a child learns to read, they have learned to speak a language; they initially should acquire their language, their mother tongue. Robyn fox (2015) in her research on how to use research-based strategies for students to improve phonics and fluency talks about five certain areas that need to be focused on to improve a child's reading especially for children with learning difficulties. The first, phonemic awareness, which means how a word is broken into segments based on sound. The second, phonics; described as the relationship between the sound of the language and its written form. It is defined as decoding a word. The third, fluency; ability of a person to recognize the words and reading it with expression. The fourth, vocabulary, accounts to be an essential part of the language, as it enables us to read and communicate effectively. The last is reading comprehension; goal that ultimately needs achievement while learning to read. Mandy Nayton (2013), talks about factors that can help in contributing to successful reading and comprehension. One should be an active reader as well as an active listener and should be able to link different aspects of the sentence, a paragraph with their memory and knowledge to make correct interpretations.

Maria Jose (2017), Kumar and rani (2014) both talk about learning disabilities being neurologically-based-processing problems. These processing problems can interfere with learning necessary skills such as reading, writing, or mathematics. It can also interfere with higher-order skills such as being organized, planning time, abstract and logical reasoning, long- term, short-term memory, and attention. The initial step of diagnosing a

learning disability is to rule out vision impairment/ hearing impairment. A person may then take it forward by working with a psychologist or a special educator who can use specific tests to help diagnose the disability a child may be facing. Kitchen and Dufalla (2006) quoted, "Learning disabilities can be divided into broad categories of speech along with language disorders, academic skills disorders, and Other (such as coordination disorders). Included in this category are expressive writing disorders and other expressive language disorders.

- Dyslexia: A person has average to above-average intelligence, but has deficits in visual, auditory, or motor process, which have interference with reading and the comprehension of it.
- Dyscalculia: A person has average to above-average intelligence but can face difficulty around numbers or remembering facts about the same over a period.
- Dyspraxia: A person has problems with messages from the brain being correctly transmitted to the body. The muscles under this condition are not paralyzed or weak, but they have problems working together in sync.
- Auditory Perceptual Deficit: A person with auditory perceptual deficit can face difficulty in receiving accurate information from the sense of hearing. There might be no problem with the individual's hearing; it is how the brain interprets.
- Visual Perceptual Deficit: The individual has difficulties receiving or processing accurate information from their sense of sight; they might have a problem picking out an object from a background of other objects or seeing things in an incorrect order.

Korb (2010) discusses the importance of early identification of a learning disability for the appropriate education to be planned to help the individuals to overcome their disability. The researchers, along with the teachers, together should identify the areas that need validation and standards that need to be met to provide useful help in overcoming the difficulties. Jeremy ford (2013) in his article on educating students with learning difficulties in inclusive classrooms to adjust and learn to grow up into better beings. He discussed three methods for the same. First one being co-teaching, where a general teacher should work along with special educator to provide better support to students with a learning disability. The second one discussed is differentiated instructions, that talks about other diverse ways to teach children with a learning disability. The third one is peer-mediated instructions and interventions.

RESEARCH METHODOLOGY

The conducted research is descriptive and qualitative in nature and aimed to investigate the learning aids available for children in the age group of 5-10 years with Learning disability. It was conducted through participant observations and activity-based trials under the Orkids inclusive set up in Uttam Girls School, Shastri Nagar, Ghaziabad. Discussions were also taken up with occupational therapists and psychologists to understand the field of special education.

Secondary Research and Primary Research

- Research papers and data available online were consulted.
- Study material apart from that of learning disability was also studied to understand other relevant factors impacting the child.
- The major part of the research was conducted in Uttam girls school, 8-10 children who used to come for special remedial classes were observed.
- The school was visited 2-3 times a week for 13 weeks depending on the availability of the children and allowance by the head Special Educator.
- The data for the research was recorded through note-taking, video clippings, and photographs, samples activities were tried to understand key areas that need attention for improvement of the child.
- 5 interviews were conducted with people working in the same field. The interviews were unstructured and mostly taken to discuss the available learning aids and to understand different measures taken to ensure improvement.

RESULT AND ANALYSIS

Various remediations are being provided by schools and even the government, but that can be availed at a later stage once the child is certified by the doctors for facing learning disabilities. The first and foremost measures that can be taken up are by the parents themselves in order to support their child. It was found after the research that very few parents accept the fact that their child has a learning disability and needs some special attention to overcome the barriers of conventional learning. Young minds are sensitive and naïve, once the children begin going to school teachers play an essential role in molding the behavior of the them and have an impact on their learnings.

There are various learning and entertainments mediums available for children. There are help books available for parents as well, to help the child, but each child is unique and

cannot be compared to others, making it complicated while developing a system or providing books to help the children who face learning difficulties.

- Some books have moral stories, but the child may not be able to relate to them at a general level.
- Short and light stories, having missing connections, leading to confusion for the children. The books accommodate many stories, accompanying few illustrations.
- The available activity books are filled with activities with just basic instructions.

The children who were a part of this research showed less interest in the stories and activities which they found difficult or lengthy.

- They were more interested in reading stories accompanied by more illustrations and less of text.
- It was also noticed that the children were attracted to pure form of illustrations and did not demand them to be realistic.
- They were comfortable reading the font, which was clear along with text size that was not too small.
- If the children were asked to do a task on their own, they did not complete it and expected support, explanations, and encouragement to further complete it.

Activity trials and noticed traits

- Knowledge about alphabets (Capital and small alphabets, related sounds)
- Word Knowledge, story reading (reading, comprehension, pronunciation)
- Creativity to think (random word selection and story building)
- Joining dots, maze, word search (understanding instructions, attention span, perceiving gaps)
- Colouring, drawing activities (ability to make choices, memory, sense of space)
- Engaging with the children in conversation (to understand likes, dislikes, sharing stories)
- Questionnaire-based activity (to understand selections and instructions, support required)

Traits included:

- The grip and the way to hold tools/ objects.
- Children have personal bias behavior attached in selecting colors. Some have an emotional connection, a story related, or creating a particular pattern. They are interested in colored images over black and white ones.
- The children get distracted very soon, reflecting their attention span. If disinterested they start fiddling with anything around.
- The children have the habit of laying on the table, taking support.
- Children like working on simplified objects/ figures, avoiding complications.
- They enjoy working through activities involving different materials.
- Few statements by children during conversations included complaints regarding writing but performing activities, not meeting the expectations of their parents and friends or their needs not being considered.

DISCUSSION

Virginia et al. (2008) discussed that if children or adults exhibit impairment in processing words of a language, both orally and in writing if they have developmental dyslexia. Their listening skills and verbal communication, however, is not that affected. If the focus is laid on their learning to read words, they can usually overcome this difficulty and have an understanding of the text read. Döhla D, Willmes K, and Heim S (2018) mention about dysgraphia. Developmental dysgraphia is a disorder that is closely related to writing and spelling skills. Dysgraphia is a language-based specific learning disability (SLD) that initially affects writing. It is difficult to spot that with young learners, as every child develops literacy skills at a different rate. With the first child parents are not well versed about the right time for children to first start talking, interacting with sounds, and responding to various activities. Even if they notice any unusual behavior, they tend to ignore it in the name of the child being young and not understanding. However, if these habits do not go away with age, parents should consult doctors or special educators. There are times when even after diagnosis, parents find it emotionally difficult to accept if their child is facing some problems, major problem lies here, or we can say starts. Ignorance or not accepting the facts do not help but lead to further problems. If the parents readily accept and figure out further steps, it will be helpful in the growth of the child.

SUGGESTED SOLUTION AND CONCLUSION

Through the primary research, it was discovered that children were doing better when guided and assisted.

The solution suggested is given in the form of a book that contains 3 stories with characters that children can relate to, followed by a few activities to build the interest of the child. The stories and activities, come with a parent's path that gives insights to parents about the learnings the child will have, encouraging the child and parents to work collaboratively. The parents can further collect or prepare activities with the help of the parent's path to work on specific areas for the child's growth.

Anthony Liccione Quotes, "Everyone needs a house to live in, but a supportive family is what builds a home." Stating this quote to relate, to how a supportive family can build a child's bright future. There is a need to professionally take assistance from Special educators and counselors as well to help the child further. Collaborative efforts can act as the supplements increase the chances of children with learning difficulties to perform better.

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