

Use of Worksheets for Children with Dyslexia

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Dyslexia and its impact on academic performance

Dyslexia is a life-long neurological condition which has no physical manifestations. Children with dyslexia have average to above-average IQ with unique potential and abilities for out-of-the-box thinking, yet there is a significant disparity between their potential and their actual performance. In class, a child with dyslexia could struggle to read, spell, write or do maths. In turn, a lack of fluency in these skills could make it difficult for the child to retain, recall and take exams. The degree of dyslexia – mild, moderate or severe-determines the extent of the difficulty faced. Dyslexia could be suspected in children who struggle in class I (or later) and a standardised assessment test could ascertain it.

Structured, multi-modal teaching based on Individualised Education Plan (IEP) helps to build essential academic skills and concepts. Remedial teaching leverages the strengths of the child to help him or her cope with the difficulties in acquiring these skills and concepts. For instance, a child with mild dyslexia can be helped by a trained mainstream teacher within the classroom. Additional support required by a child with moderate dyslexia could be given by a special educator in a Resource Room set up within the school. Extended full-time remediation would be essential to help a child with severe dyslexia to overcome the large divide between the expected grade-level performance and the actual performance.

Teach them the way they learn

The teaching-learning process aims to impart understanding of concepts and skills such that the learner internalises these and can recall them at a later date. The recalled information is further used as the basis for expressing understanding, generalisation, application or acquisition of new knowledge.

Everyone has individualised ways to learn, process and retain new information, more so children with dyslexia; they learn best using the multi-modal approach. At the *Ananya Research and Learning Centre*, a project of the Madras Dyslexia

Association (MDA), the teaching methods are closely interwoven with the Multiple Intelligences (MI) approach.

To enable a child to achieve appropriate academic milestones, the essential skills that are in focus in primary school are reading, spelling, writing and maths (with sub-skills). For example, in order to accomplish a meaningful and independent reading session, the sub-skills involved are: instant recognition of sight words and decodable words, understanding of the contextual meaning, making cumulative meaning of a sentence and then a paragraph. Automaticity (or fluency) is essential to accomplish this.

Writing involves skills of writing legibly within the space provided and expressing thoughts cogently and fluently using appropriate words which are put together using correct grammar, spelling, sentence structure and presentation.

The ideology *teach them the way they learn* drives the teaching methodology adopted at our centre. In this scheme of teaching and learning, worksheets come into play only after the child has completely internalised a concept or skill; they are used as a tool to evaluate the child's outcome of learning and to monitor their progress.

Planning and creating worksheets

Worksheets have always been in use at our centre. They have specific objectives, for example, in Worksheet 1 (shown in Figure 1), the objective is to assess not just the internalisation of vowels. It drills down to examine the acquisition of a specific essential skill - vowels with a *short* sound. Graded and individualised worksheets are administered to a child, based on his or her strengths and areas that need to be strengthened.

After the initial worksheets validate the acquisition of the alphabetic principles, Worksheets 2 and 3 (shown in Figure 1) illustrate worksheets that can be used at different stages of building reading skills. Starting from the correct identification of aspects like vowel sounds and consonant blends, it progresses to reading and choosing the correct

word to check both reading and comprehension. These start with simple consonant-vowel-consonant (CVC) words and progress to phrases and then to complete sentences. This ensures that the child's writing skills do not come in the way of assessing the reading skill.

Many children with dyslexia face difficulties as they progress from one skill to another closely-related skill, leading to a breakdown of a previously-attained skill. The following example shows how a worksheet is employed to test the use of short and long vowel sounds in words with a silent e. This series (as shown in Figure 2) begins with a word list and progressively leads up to the use of words in a sentence. As mentioned earlier, the child starts with minimal writing and gradually, the quantum of writing is increased.

Similar graded worksheets (Figure 3) are used to assess multisyllabic words, compound words and vocabulary.

Reading and writing are closely related and can be developed only when a child develops language

skills. Oral vocabulary-building activities, like naming of objects around them and generating words linked to an object or a specific concept are done every day. This then, becomes reading practice along with strengthening spelling and finally ends in written work. Exercises, like *Show & Tell* and *Circle Time*, build skills required for ideation and for organising thoughts. *Picture Helps* (Phelps) is the next activity that aids the child in strengthening sentence structure and grammatical skills. Skills are progressively built to first write a few lines as points and then, a short paragraph.

While these essentials are acquired gradually, the child gets ready to attempt worksheets that test his or her writing skills related to grammar, sentence structure, passage structure and ideation. This graphic (Figure 4) shows the sequence of administering the worksheets - an exercise on completing sentences by arranging the given words in the correct order, followed by a worksheet with questions that use a visual cue to rearrange the given words into a semantically correct sentence and finally a worksheet with a graphic tool and

Worksheet 1 Circle the odd one out 1. bun, sun, run, pen, gun 2. cat, hut, bat, hat, mat 3. pin, tin, bin, ten, win 4. den, fan, fen, pen, men Consonant Blends put under correct heading spoon, star, smoke, snake, slide swan, clock, fly, brush, tree small, snow, spin, flat, stop	Worksheet 3 Read and tick the correct answer 1. Sam likes to wear red car / cap. 2. Priya rides the car / cot to school. 3. After school Dinesh plays with log / dog. 4. At 9 'O clock Sita goes to bed / bud. 5. The dog bangs / barks at a man. 6. The letter d says big / done 7. In the word black take away 'l' Then read word back / dack . 8. Mira has a book / took. 9. Yesterday Suresh and his mother went / want for a walk. 10. My father drew cash / fish from the bank.
Worksheet 2 Tick the correct word 1. The ball is (smell / small) 2. The blue bird is in the (nest / best) 3. We have a (test / rest) today 4. He (west / lost) his pen 5. Ram is the (must / best) boy in class	

Figure 1. Graded and individualised worksheets

Short and long vowels: silent 'e'

1	2	3	4
Short vowels	Long vowel	Short vowels	Long vowel
	Add an e to make the vowel say its own name		Add an e to make the vowel say its own name

a

1. at	ate
2. can	can__
3. hat	hat__
4. mad	mad__
5. mat	mat__
6. man	man__
7. tap	tap__

i

1. bit	bite
2. hid	hid__
3. kit	kit__
4. pin	pin__
5. pip	pip__
6. rid	rid__
7. rip	rip__
8. win	win__

Cross out the wrong word

1. The plumber repairs the (pip, pipe).
2. All of us like to eat (ripe, rip) fruits.
3. I (lick, like) to watch T.V on Sunday.
4. Prema has a very (cute, cut) doll.
5. We can use a match to light the (fir, fire).
6. We must not eat (stall, stale) food.
7. Mothers take (care, car) of children.
8. The hair on the lion's neck is called (man, mane).

Figure 2. A word list leading up to use of words in a sentence

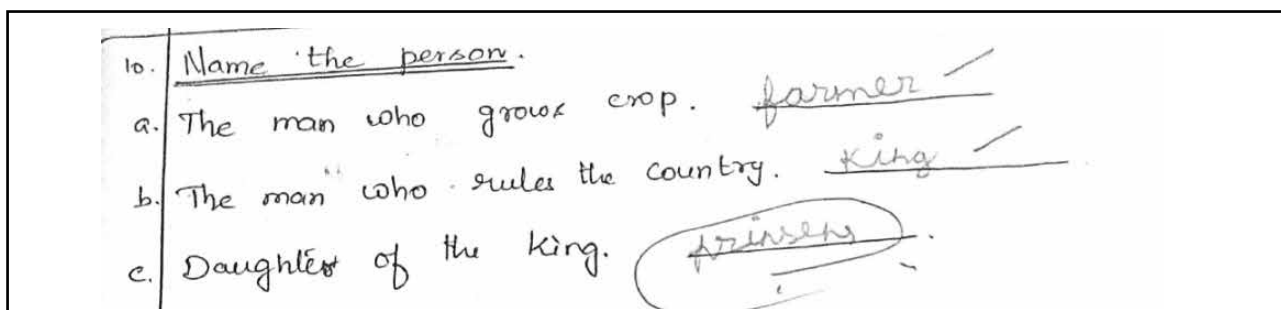


Figure 3. Worksheet used to assess multisyllabic words, compound words and vocabulary

1

Read the words and complete the sentences

Sam has a bad cat

At last Fat _____

Dan can _____

The rat ran as fast _____

Nan can hand _____

a
cat
bad
pam
can
tag
maps
pass
the
cat
as
the
the
tacks
Dad

2

Read the words and write the sentence

the can. at

is

Sal mad

Sal is mad at the can.

van. has

the Ann

3

Birthday Party

New dress, Presents, Blow, Guests, Invitation, Thankyou, Friends, Gifts, Cake, Caps, Sweets, Balloons

1. invite friends 2. I blow candles 3. Guests sing happy birthday 4. I cut cake 5. My friends give me presents 6. We eat chips, sweets, cake and ice cream 7. I give return gifts 8. We play games 9. I thank my friends

Figure 4. The sequence of administering the worksheets

leading sentences/phrases to test the skill of writing sentences related to a given topic.

Expressive writing requires essential foundational skills. Some of these are – knowing categorisation, identifying the sequence of events and arriving at the main idea of a paragraph. These skills are

essential for developing reading comprehension as well. Extracts from worksheets that check the acquisition of these skills built in the remedial sessions through multi-sensory and interactive activities are shown in Figure 5.

In Figure 6, a worksheet which is similar to the one

Menu Mix - Up

Directions: Circle names of vegetables in green.
Circle names of drinks in red.
Circle names of desserts in pink.

water	corn	pie
cookie	peas	carrot
juice	milk	cake

Directions: Write each food word on the correct line.

Drinks

Vegetables

Desserts

In what order did events happen?

Everyone in my family was in the show. First my sister danced. Then Mom and Dad acted a scene from a play. Third on the stage was my brother reading a poem he had written. I was the last member of the family to appear, and I sang my favorite song.

Circle the words that describe the sentences.
hiding acting cooking singing
dancing reading running whispering

Write the words you circled in the order that events happened.

1. _____

2. _____

3. _____

4. _____

Someday we will all have robots that will be our personal servants. They will look and behave much like real humans. We will be able to talk to these mechanical helpers and they will be able respond in kind. Amazingly, the robots of the future will be able to learn from experience. They will be smart, strong and untiring workers whose only goal will be to make our lives easier.

Which sentence from the paragraph expresses the main idea?

- Someday we will all have robots that will be our personal servants.
- We will be able to talk to these mechanical helpers and they will be able to respond in kind.
- They will look and behave much like real humans.

Figure 5. Multi-sensory and interactive activities

that is used in mainstream schools is shown. This is a comprehensive assessment of a child's reading, spelling and writing skills and is administered when the child is sufficiently proficient in these skills.

Worksheets based on strengths and needs

The special educators at our centre use the Multiple Intelligences (MI) approach to design worksheets, that is, the worksheets are based on a child's dominant intelligences. According to this theory, an individual is vested with eight different intelligences in varying degrees of dominance. The dominant intelligence is tapped to facilitate learning. For example, a child with dominant Logical-Mathematical Intelligence and

Interpersonal Intelligence would be able to learn effectively through group activities that include puzzles.

An extract of a worksheet that would be attractive to a child with a high Logical-Mathematical Intelligence and Linguistic Intelligence is shown in Figure 7.

Dyslexia is a condition that is often accompanied by auditory and/or visual processing difficulties. This means that despite having no issues with vision or hearing, the individual could have difficulties in processing visual or auditory inputs, for example, difficulty in:

- Differentiating an object from its background,

making it hard to scan text for relevant information

- Retaining and recalling letters/objects in the correct sequence, for example, perceiving *help*

as *hlep*

- Spatial management, for example, managing the spacing between words

Name _____

Ben's Frog
Ben had a frog in a box.
The frog was little and green.
Ben found it in the park.
The frog was by a rock.
He gave it to his friend.



1. What did Ben have?

2. Where did Ben keep his frog?

3. What color was the frog?

4. Where did Ben find the frog?

5. What was by a rock?

6. What did Ben do with the frog?

Figure 6. A comprehensive assessment of reading, spelling and writing

n o s w - it is white in colour found on mountain r o w g - it happens to living things l e o w b - part of a body o a g t - is a grass eating animal r o c w - it is a black bird	Give one word for : 1. It is the opposite of cruel k _ _ d. 2. A person who cannot see is b _ _ _ d. 3. A young boy or girl is a ch _ _ d 4. A cow is a domestic animal but a lion is w _ _ d. 5. The past tense of sell is s _ _ d. 6. It is the opposite of hot c _ _ d.
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Figure 7. For a child with high Logical-Mathematical Intelligence and Linguistic Intelligence

A child's difficulties (for example, visual processing difficulties) are also borne in mind, while designing a worksheet. The exercise given in Figure 8 will not be given to a child with difficulties in 'visual figure'

background and sequencing. Instead, he or she may be given an alternative like the one shown in Figure 9.

Put a ring round all the /sh / words that you can find in this word snake.

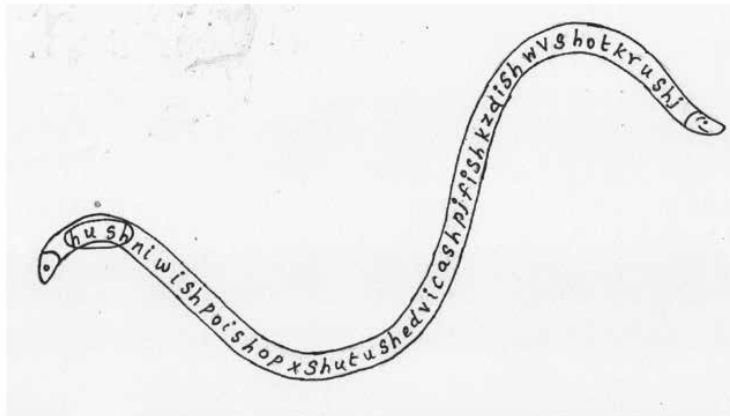


Figure 8.

Say the "sh" sound

Fill in / sh / in each space, then rewrite the sentences. (Remember, every sentence begins with a capital letter and ends with a full stop.)

1. Mum got fi __ at a __ op.
2. I wi __ I had a di __ of fi __ .
3. __ ut my __ ed.
4. __ e has got a lot ca __ .
5. Ben got on a __ ip in a ru __ .

Figure 9.

Children at our centre are also trained to build and develop certain essential skills, like visual-perceptual skills using play-way methods, circle time, and role play are some interesting ways to develop them. Worksheets like the one shown in Figure 10 are given to assess the acquisition of such skills.

These are some examples of how worksheets are individualised (one of the basic tenets of remedial teaching) for each child in our centre. The language and the format of the worksheet are kept uniform for a child. This reduces the confusion that could stem from some of the instructions, thereby hampering performance.

A child with dyslexia could have deficits in *executive function* - an important set of skills that regulate one's thoughts and actions. This is required not just for academics, but also for day-to-day functioning. Remedial teaching helps a child develop strategies to cope with this difficulty too. Worksheets present a child with opportunities to practise the skills of paying attention, recalling, planning and organising the appropriate response and self-monitoring the responses.

Administering worksheets to a child with dyslexia

The special educator watches the child while the worksheet is being completed. The worksheets are not set up for struggle or failure. If required, the child is encouraged to answer orally as a preparatory step to filling in the worksheet. If the child is unable to attempt the worksheet with some level of confidence and ease, the special educator replaces it with an easier level of worksheet. This not only keeps the child motivated, but it also helps the child practise resilience and overcome the impulse to quit. The child goes through some additional reinforcing sessions before attempting another worksheet.

When children have satisfactorily built and developed the essential skills and strategies and demonstrate the same in various activities, they are prepared to integrate with the mainstream teaching-learning process. They are then progressively trained to do worksheets given in mainstream schools.

Worksheets are, hence, very relevant to special education. They can be aligned with the principles of remedial teaching and check acquisition of specific skills and sub-skills, thus meeting the objectives of remedial teaching.

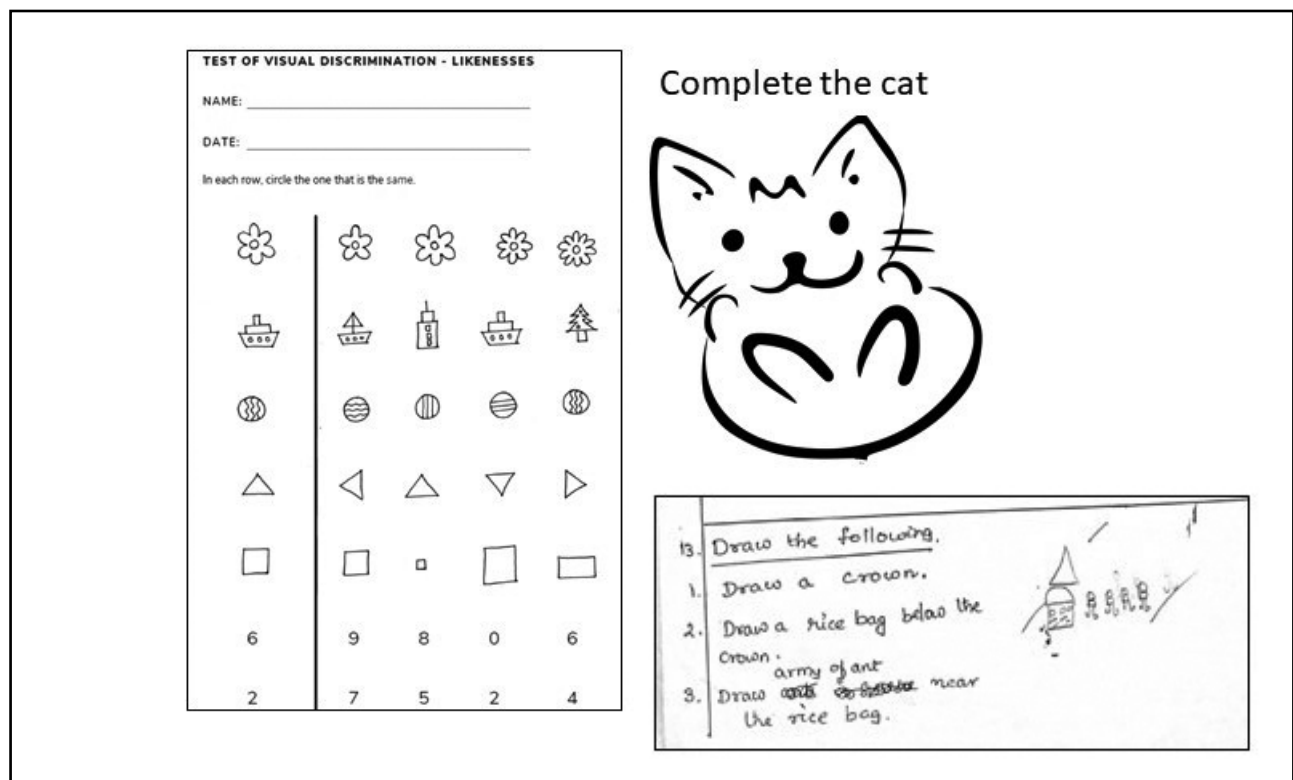


Figure 10. Worksheets to assess the acquisition of essential skills



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