DYSPRAXIA IN THE CLASSROOM:
What is it and how can we help?

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WHAT IS DYSPRAXIA?

I. INTRODUCTION

- Dyspraxia is a developmental disability of organisation of movement. It is caused by an immaturity of the brain resulting in messages not being properly transmitted to the body.
- Subtype of Developmental Co-ordination Disorder
- Specific disorder in which an individual presents with deficits in conceptualisation, planning and execution of movement.
- Motor planning deficits should be below other areas of function and performance

II. WHAT IS DEVELOPMENTAL DYSPRAXIA?

From the Greek word ‘praxis’ which is the learned ability to plan and carry out sequences of co-ordinated movements in order to achieve an objective.

Dys is the pre-fix ‘bad’. Dyspraxia therefore literally means bad praxis and is a term used to describe behaviours that results from an underlying weakness in praxis

A. Components of praxis

- Ideation – the brain conceiving the idea of doing or trying something
- Motor programming – having the ability to intrinsically organise the movements required to carry out the idea in temporal sequence, spatially and with right amount of force
- Execution – carrying out the sequence of actions
B. Development of praxis

Good praxis or motor planning ability requires accurate information from all sensory systems of the body, mature body awareness, perception of movement and basic neuromotor functions. Example, early learning of movement patterns

Feedback loop for efficient praxis

Motor planning/praxis components organised in different parts of the brain

Success requires all three components to link together successfully

Brain connections are made in response to and as a result of our interactions with the environment

The more consistently successful an individuals interaction more organised, self reinforcing and continuing improvement.

C. What happens in dyspraxia

- Non optimal wiring of the brain.
  - Insufficient Pruning
  - Disorganised wiring = INCONSISTENT interaction with environment
- Areas of brain affected
  - Sensory motor cortex - Visual spatial working memory
  - Brain stem: sensory processing- Limbic system (emotional lability and stress)

III. DYSFUNCTIONS, SECONDARY BEHAVIOURS AND PROBLEMS

A. Primary problems

- Clumsy, accident prone and messy.
- Experience a prolonged period of struggle in attempting to master a new skill
- Motor skills - particularly unfamiliar or those requiring variety of response/force (i.e. ball skills) carried out with stiff, awkward movements rather then smooth fluent ones
- Particular difficulty carrying out co-ordinated actions smoothly
- Particular difficulty carrying out sequenced actions smoothly
- Particular difficulty carrying out actions to a timed sequence
- Difficulty integrating learnt motor skills with other skills and generalising skills
• Motor skills inconsistent in quality and success. Child does not know whether they will perform a task successfully or not
• May show motor impersistence i.e. difficulty sustaining co-contration
• Poor posture
• Excess movements generally i.e. tongue out when cutting with scissors
• Muscular tension common due to extra effort needed to carry out skills i.e. breath holding

B. Associated Behaviour
• Establish routines for himself/herself to eliminate the need for unfamiliar movement.
• A bright child may be able to compensate for his lack of accurate sensory information by figuring out the demands of a task cognitively but may spend undue mental energy in doing so.
• A child of average intelligence may spend his time minding another child’s business, and may be verbally manipulative in order to avoid having to perform motorically.
• This child may imitate the actions of another child rather than try to initiate the activity himself/herself.
• Another child may even experience difficulty imitating the actions of others and find it difficult to follow a teacher’s verbal instructions.
• Significant difficulty finishing his/her work on time or he/she does not have an idea of how to start the strategy for finishing the task.
• Another child may rush through the task as he/she relates to the end product. This child typically turns in messy, haphazard work.
• Difficulty making friends and immature social skills
• Poor non-verbal communication and speech difficulties
• Poor visuo-spatial awareness

C. Secondary complications
• Lack of self belief
• Lack of confidence
• Fight, flight or fright responses
• Anxiety
• Stress
• Refusal to interact so lack of practice
HOW CAN WE HELP?

In order for a dyspraxic child to perceive themselves as being successful they must actually be successful.

Therefore aims for teaching and therapy at home and school must include:-

1. PRESERVE MOTIVATION AND CONFIDENCE

This is a real disability with performance being unpredictable and inconsistent therefore recognition and awareness of difficulties required in order to leads to understanding and appreciation.

- Modify our responses: reassurance rather than criticism
- Descriptive praise and encouragement. For example, In class it is important to mark work of a child with Dyspraxia using ticks and descriptive praise, and praise on effort rather than performance.
- Make all goals attainable
- Have feedback sessions at the end of lessons
- Acknowledge good points of character i.e. kindness, willing to continue trying

2. UPGRADE SKILL PERFORMANCE SO THAT THEIR ABILITIES MEET THAT DEMANDED BY THE ENVIRONMENT

Children can refine and generalise motor skills. However, children with Dyspraxia need time and over learning, and steps to learning cannot be assumed. They need motor skills ‘hard wired’ much more than other children

TEACHING TECHNIQUE

- List all areas of difficulty
- Place in order of priority
- Make sure that a skill is developmentally appropriate
- Make sure you have plenty of time to address difficulty and practice- do not rush!
- Break down task into the sensory-perceptual-motor components and cognitive-verbal steps (Task analysis)
- Teach each component individually either by forward or backward chaining
• **Upgrade/adapt sensory and meta-cognitive strategies** to make motor steps easier, successful and rewarding. Make sure that each step has a ‘just right challenge’.
• **Gradually build** components into whole skill - work forwards
• **Practice skill lots of times**
• **Generalise** skill i.e. different shoes and different laces
• **Follow through into everyday life** i.e. wear laced up shoes to school everyday
• **Openly acknowledge success** i.e. statement, descriptive praise

3. **MODIFY AND ADAPT ENVIRONMENT**

This helps relieve neurological stress and improves organisation, which results in increased confidence but also improved concentration and attention on the activity and content of work.

**IDEAS FOR THE CLASSROOM**

**GENERAL HANDLING**

1. Help the child identify steps needed to begin and accomplish the task. Have the child repeat directions and, if possible, write down the steps (or write them down for him/her)

   For older children rehearse:-
   
   • **Goal**
   • **Plan**
   • **Do**
   • **Check**

2. Ask the child questions of what he/she is going to do and how he/she is going to do it when he/she is within an environment that he/she needs to do something with.

3. Encourage the child to verbalise what he/she is doing while carrying out the activities.

4. **Giving a short assignment** so that the child can feel instant success in completing a task. Document the length of time a child can focus on one
task and structure the assignment so that it can be completed in that length of time.

5. Set up a system for checking off steps as they are accomplished.

6. Giving one direction at a time. After one action is successfully completed, add another direction.

7. Helping the child physically move through the action.

8. Minimising visual distractions. Check for clutter in classroom environment and on desks.

9. Reviewing how to play the game before actually playing it. Demonstrate verbally as well as visually.

10. Marking the boundaries of the game. For example, rope, string, masking tape or chalks can be used to mark a game circle or start and finish lines.

11. Stopping action between turns in order to get everyone’s attention and therefore regain control.

12. Scheduling and implementing frequent (daily) motor time so that students become familiar with behavioural expectations during motor activities.

13. Rehearse what the child has learnt on a regular basis.

HANDWRITING

- Multi-sensory handwriting programme
- Developmental progress of handwriting
- Handwriting practice to music to improve rhythm and timing
- Verbalising letter formations
- Additional spatial training and visual spatial cuing to over learn the spatial concepts of writing
- Components of handwriting to be broken down into arm shift, wrist shift, finger manipulation
- Use guidelines on paper or quadrille paper (www.sparklebox.com)
• Large scale lines and tactile paper
• Use bigger squares for maths
• Use a vertical/sloping surface so up and down have meaning, and increase of proprioceptive feedback
• Use different types of pens and pencils. Allow child pen/pencil of their choice. Roller pens are better than fountain pens.
• Reduce amount of writing as eyes also having to check on hand movements as proprioceptive memory often unreliable e.g. pre-pared sheets, multiple choice papers, less examples, allow short answers, notes, essay plans
• Mind Maps, Thinking Maps and short hand for taking notes.
• Photocopy books and highlight information rather than writing long hand
• Scanner pens for highlighting and downloading (www.dyslexia.com)

ALTERNATIVE STRATEGIES FOR RECORDING WORK
• Lesson notes taken by classroom assistant or summary notes prepared in advance by the teacher
• Access to word processing facilities and learn touch typing (see separate information pack)
• Use a Dictaphone for drafts of project work, preparation of ideas for written assignments etc
• Drawing diagrams of main ideas in a text
• Provision of the outlines of diagrams, apparatus drawings, maps etc so the student only has to label the relevant parts or annotate the diagrams

ALTERNATIVES TO READING
• Large print text
• Use of audio tapes of set books
• Recording of written texts by support staff/parents
• Presentation of written material in diagrammatic form for those students who can interpret this
SETTING OUT OF WORK

- Coloured dots i.e. green for starting place, red for finish
- Template for setting out of work prepared in advance showing where to write headings, guidelines for writing and box for drawing apparatus/picture
- Maths - Template for each sums and larger squared paper
- Geography/maps - use of set squares and tactile maps
- Rulers - use non-slip ruler, ruler with a handle
- Dycem mat to stop paper moving

TASK ORGANISATION AND ORGANISATION OF EQUIPMENT

- Time - digital watches.
- Cue cards to help sequence a task
- Diary
- Lists - place them where they are most likely to be seen and used i.e. things for school placed next to the door

PERSONAL ORGANISATION

- Learning their way around new buildings - extra practice, carrying a map, having an emergency plan
- Carrying equipment - name all items
- Organising books - Parents/teachers need to make sure that they start off with the correct equipment. Use bags with different compartments so not everything needs to be taken out.
- Adapting different styles of work and organisation to classroom i.e. child may not be flexible to new demands

DRESSING

- Looser clothes and socks
- Avoid fastenings - have elastic waist bands
- Velcro fastenings
- Press studs rather than buttons
- Elastic neck band for tie
HOMEWORK

- Write down homework required in a homework book
- Photocopy homework required
- Buddy system to make sure all notes are up to date and homework
- Parents may have the dedication to act as scribes in the privacy of the home and thereby take some of the pressure off homework tasks

EXAMS/EXAM CONCESSIONS

- Sensory processing related to limbic system - emotional fragility. Therefore increased levels of neurological stress experienced i.e. fight-flight-fright at these times. A lot more exam preparation including relaxation, practice under exam conditions, in exam room.
- Take into account:-
  - Speed of reading
  - Speed of writing
  - Fatigue effects which may reduce performance over time
  - Number of subjects taken and timetable for the exams
  - The requirement for drawing diagrams and practical tasks
- Options include:-
  - Additional time to complete the question paper
  - Rest periods i.e. 15 minutes in the hour added to the time to accommodate these
  - Use of a word processor (i.e. with spell checker suppressed)
  - A reader
  - An amanuensis
  - Tape recording
  - Presentation of a transcript if a student's writing is difficult to read
  - Special arrangements for oral components of exam if speech is unintelligible
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fil.came@learning-works.org.uk
Described as 'a practical manual for assessing individual needs' Baroness Mary Warnock goes further in her foreword and suggests that 'CAP It All' is a tool kit 'that all teachers can use'. It is certainly all of these things and much more besides!

The introduction recognises that busy teachers need to identify problems before they begin to interfere with a student's learning. Not all teachers have specialist training in SEN, but they are required to cater for all students in their classes. This book will enable ANY teacher to work through a process of assessment efficiently and professionally.

Those who are familiar with Gavin Reid's work will recognise the sound research on which it is based, and those who have worked with Fil Came will rejoice to see so much that is practical and instantly usable!

Clearly organised into 10 separate areas, any teacher can go straight to the section they require by consulting the detailed table of contents.

Specialist teachers will find much within these pages to interest them and support them in their quest to develop excellent specialist practice. There is a superb glossary of assessment terms which is a helpful reminder to us all and a really useful tool when delivering INSET to colleagues. The, resources section also holds a wealth of information particularly for those involved in outreach to parents and carers. The pupil self-assessment section is interesting – exploring ways of encouraging students to take responsibility for their own learning.

CAP It All is excellent. Clear, accessible and so useful. It may perhaps appeal more to those in the primary sector where initial concerns and accurate assessments as early as possible are so vital. However, it will also prove invaluable to those of us who work with older students, enabling us all to keep clear, concise records of student development and progress.

Edwina Cole
SENCo and Head of ALC Stanbridge
Earls School
Romsey.
Fil Came is leading consultant for Learning Works®, having previously been a teacher, Research Fellow at Bristol University and later an SEN adviser. Dr. Gavin Reid is an experienced teacher, author and international speaker. This book aims to be a practical manual for assessing individual needs and can be used as a resource bank for busy teachers, learning support staff and SEN co-ordinators who work with pupils who have learning difficulties. Its purpose is to assist the process of identification and assessment of pupils who are beginning to cause concern, due to their lack of progress in learning so that remediatory strategies can be applied to help reduce the problems.

Ten sections in the book explore the following:
- Initial Concern, outlines initial assessment and where to find information and evidence. Useful proforma are included.
- Formal Assessment examines standardised tests and advises which ones to use.
- Informal Assessment helps to gather information about/from the pupil. Helpful tick sheets and checklists are included.
- Assessing Literacy Skills advises on checks to make such as, pre-reading skill, phonological awareness, vocabulary, reading strategies used, spelling and writing.
- Assessing Maths Skills helps to identify concepts where difficulties are common, such as the counting system, vocabulary, syntax and the four rules.
- Monitoring Behaviour has checklists and assessment sheets to help record behaviour patterns over time.
- Pupil Self-assessment sheets help pupils to realise what type of learner they are and how they feel about their own learning.
- Planning to make a Difference advises on targets and Individual Educational Plans
- The book concludes with useful websites, lists of resources and support groups.

All resource material is written in accessible language, ensuring qualifications in SEN are not required to fully access this solution-focused manual. Those working with pupils with SEN in all phases will find this a brilliant resource.

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