

香港資優教育學院
The Hong Kong Academy for Gifted Education

Information Sheet

HANDWRITING AND THE GIFTED STUDENT

“My 10-year-old son has been diagnosed with the writing disability dysgraphia. Because he has difficulty with writing tasks, he tends to avoid them. His teacher has expressed that my son seems to be unmotivated and oppositional regarding writing assignments. How can I make sure the school fully understands my son’s disability and what modifications should I suggest?” (Mother of a gifted child)

The physical act of writing can be very difficult for some highly able or gifted children. The content is usually, imaginative and inventive, often of high quality, but the scribing with pen or pencil can be painstakingly slow producing illegible handwriting. If difficulty in writing is observed, it is usually messy handwriting, which is frequently attributed to poor motivation. The perceived motivational deficits associated with handwriting difficulties are a result of the struggling performance in school not the cause of it. Human beings are innately wired to learn. So, if children are not motivated, adults need to discover why and provide help and assistance.

Dysgraphia is a neurological disorder characterised by writing disabilities. Writing requires a complex set of motor and information processing skills. In children the disorder generally emerges when they are first learning to write. They tend to make inappropriately sized and spaced letters, tend to write wrong or misspelled words, inter-mix letters and numbers in formulas and have very sloppy handwriting despite thorough and competent instruction.

To illustrate some of the complex requirements before writing takes place it is now thought that the essential competencies required in writing well include:

- A) The primary requirements:
- An intact central nervous system
 - Intact cognitive ability
 - Intact language skills (both receptive and expressive)
 - Motivation
 - Skill development
 - Practice, and
 - Emotional stability.
- B) Secondary written language requirements:
- Concepts of organization and flow
 - Writing skill
 - Spelling skill
 - Syntax and grammar knowledge
 - Mechanics, productivity, & accuracy
 - Visual spatial organization
 - Simultaneous processing
 - Revisualization (visual memory for symbols)

香港資優教育學院
The Hong Kong Academy for Gifted Education

Information Sheet

Dr Edward Chitham, Education Consultant (1994) wrote in an NAGC (UK) article “Gifted Children and the Process of Writing” that:

“Again and again as we look at case studies of bright children who underachieve, we encounter the problem of writing block; boys and girls who are orally fluent but whose work on paper is scanty, untidy, sometimes mis-spelt and who find the whole process deeply distasteful.”

Gifted children and students are often perfectionists and having illegible handwriting can be extremely destructive to their confidence and self-esteem, resulting in students not performing well in the classroom (underachieving).

The gifted child affected by Dysgraphia can become extremely frustrated at not being able to express him or herself fully in the traditional classroom due to excessive difficulties with writing and laboured copying. Often a gifted child is a highly creative thinker yet processing the information to the written page can be a huge challenge. However a child or student that has difficulty with handwriting generally is not seen as a candidate for accelerated coursework. Often a teacher will dwell on the scribing difficulty and not comprehend how a child of high ability can have difficulty writing. Consequently the child is not challenged, held back and becomes bored, frustrated, under achieves and eventually suffers from low self esteem and confidence. This can lead to negative behaviour in the classroom, changes in personality and a child who doesn't enjoy learning anymore.

Deuel (1994) has divided dysgraphia into three subtypes:

1. Dyslexic dysgraphia - spontaneously written text is poorly legible and spelling is severely abnormal. Copying of written text is relatively preserved, however, and finger-tapping speed on a neuropsychological battery is generally normal.
2. Dysgraphia due to motor clumsiness - associated with poorly legible spontaneously written text, preserved spelling, and poorly legible copying of written text. Finger tapping speed in such cases is generally abnormal.
3. Dysgraphia due to a defect in the understanding of space - associated with poorly legible spontaneously written text, preserved spelling, poorly legible copying of written text, and normal finger tapping speed.

Some of the symptoms of Dysgraphia , many of which occur in groups, include:

- Tight awkward pencil grip
- Awkward body position
- Illegible handwriting
- Inconsistencies, e.g. mixtures of print and cursive, upper and lower case, irregular sizes, unfinished words, omitted words, position on page, spaces between words
- Avoiding writing or drawing tasks
- Saying words out loud while writing
- Strong verbal but poor written skills
- Unfinished or omitted words in sentences
- Non-existent punctuation
- Difficulty organising thoughts on paper
- Difficulty with syntax structure and grammar
- Large gaps between written ideas and understanding demonstrated through speech

香港資優教育學院
The Hong Kong Academy for Gifted Education

Information Sheet

How can Parents and Teachers help the Child with Dysgraphia?

Intervention for written language disorders depends upon an accurate assessment of the student's specific deficiencies. Most of the intervention strategies take the form of:

Remediation – recommended when the difficulties are related to the child's age. Remediation strategies for early elementary age children with written language problems include writing readiness exercises, instruction and practice using appropriate pencil grip, formation of symbol skills, practice to increase fluency, and direct instruction to improve writing organization.

- Stress to school personnel that slow or messy work habits are often a result of graphomotor difficulties and do not reflect deficits in motivation
- Allow students to use the writing system that is most efficient for them, after they have learned both script and cursive writing.
- When writing compositions, students should use a staging procedure, which includes focusing on one component of the task at a time. For example, first the student would just generate ideas and write them or type them, or have someone else type up the ideas for them. Then, they would focus on improving and organizing their ideas. Subsequently, they would focus on spelling, capitalization, and punctuation. They could have a manual that contains all the rules they have learned up to that point in time. They would then refer to this manual when proofing and correcting their work.

Bypass – recommended when specific deficiencies are present. Examples include shortening assignments, increasing performance time, grading first on the content of the work and then on the quality, avoiding negative reinforcement, using oral exams and allowing oral presentations from the student, and giving tests in untimed conditions. Bypass strategies utilizing computers and other assistive devices are also helpful for students with written language disorders.

- Give students extended time to complete written work and reduce the volume of written work both throughout the school day and at home. Many times, teachers will remark that the required writing in their classes is not great; however, if the demands for the entire day are tallied, they may be substantial.
- Teach students to type using a word processing program; most find this to be a useful strategy.
- Speech-recognition software may be helpful, because it allows hands-free operation of a computer through dictation. Speech-to-text technology programs are compatible with most word processing software programs, automatically insert punctuation, and contain comprehensive vocabularies. Many programs also contain text-to-speech technology that allows students to hear text read aloud.
- Students should be provided with lecture, overheads, and pertinent in-class information in written form, such as teacher-prepared handouts or copies of notes. The best option is for students to have copies of teachers' notes; otherwise the student is beholden to the note-taking skills and availability of other students.
- If a student's typing speed is adequate, he or she should be allowed to take notes using a computer, when available.
- Some students may need alternative test formats, such as short answer or multiple choice questions rather than essay questions or the option to provide oral answers to exercises, quizzes, and tests.

香港資優教育學院
The Hong Kong Academy for Gifted Education

Information Sheet

Changing expectations on the part of teacher and student so that both better understand the nature of the issues and how they can be managed. When dysgraphia is the result of multiple deficiencies, remediation and bypass of the problem become more difficult.

Children who struggle to write often avoid writing tasks, not because they are poorly motivated, but because the task of writing requires an inordinate amount of effort for them. Additionally, the tendency of many professionals to label them as unmotivated does not help them perform more successfully in school. They need specific accommodations and modifications that will reduce and/or bypass the demands for written output in the educational setting.

Below are some ideas for how to teach different age groups suffering from Dysgraphia to overcome some of the difficulties they may be having with written work:

Early Years

- Use paper with raised lines for sensory guidance to staying on or within the lines
- Try different pencils and pens to find the one most comfortable
- Practice writing letters and numbers in the air with big arm movements
- Practice letters and number with small hand and finger movements
- Encourage the correct grip, posture and paper positioning. It is important to reinforce this early, as it is difficult to unlearn bad habits
- Use multi sensory techniques for learning letters, shapes and numbers, e.g. writing in sand, rice, sugar and salt. Talking through big motor movements, e.g. “b” is “big stick down circle to my right”
- Introduce a word processor/computer early but do not eliminate handwriting. A computer will make the writing process less frustrating but we still need handwriting to be able to function in the world
- Be patient and positive, encourage and praise

Primary Students

- Allow the use of print or cursive whichever is more comfortable
- Use large graph paper for maths in order to keep columns and rows organised
- Allow extra time for writing assignments
- Begin writing assignments with drawing or speaking into a tape recorder
- Alternate focus on written assignments, e.g. some for neatness, some for spelling etc
- Teach different types of writing, e.g. essays, short stories, poems
- Do not judge or assess timed assignments on neatness and spelling
- Have the student proof read own work at a later a date, its always easier to see mistakes after a break
- Help students create a checklist for editing their work, e.g. spelling, grammar, and neatness
- Encourage the use of a spell checker. Speaking spell checkers are available.
- Have student complete task in small chunks
- Find different ways of assessing knowledge, i.e. oral reports, visual projects
- Encourage small written tasks such as letters, diaries, and lists

香港資優教育學院
The Hong Kong Academy for Gifted Education
Information Sheet

Secondary Students

- Provide a tape recorder to supplement note taking and assignment preparation
- Assist with an assignment plan that breaks writing into chunks
- Create a list of key words that will be useful in writing projects
- Ensure feedback is constructive and give both strengths and weaknesses and do not dwell on the handwriting
- Use current technology such as voice activated software if the mechanics of handwriting are a major hurdle

Many of the above tips can be used in all age groups.

Handwriting is an issue that can have a profound effect on the confidence and self esteem of children and students and the way they perceive and remember their school days. It also has effects on whether we see ourselves as successes or failures. It is important to remember not to judge a child solely on their handwriting skills.

Able children particularly dislike routine and repetitive work, so when combined with brains that work much faster than their hands can write, leads to a situation that is frustrating, demotivating and if not understood and acknowledged can lead to significant underachievement. For these reasons some, if not all of these strategies, should be taken into account when teaching and assisting a child or young person who says "I can't write!"

Suggested Reading

- Cavey, D.W. (2000). *Dysgraphia: Why Johnny Can't Write: A handbook for Teachers and Parents*.
- Deuel, R.K. (1994). Developmental dysgraphia and motor skill disorders. *Journal of Child Neurology*, 10 (1), 6-8
- Levine, M. (1994). *Educational Care: A System for Understanding and Helping Children with Learning Problems at Home and in School*. Cambridge, MA: Educators Publishing Services.
- Richards, R.G. (1998). *The Writing Dilemma: Understanding Dysgraphia*. RET Center Press.
- Richards, R.G. (1999). *The Source for Dyslexia and Dysgraphia*. LinguiSystems, Inc.
- Silver, L. (1998). *The Misunderstood Child: Understanding and Coping with Your Child's Learning Disabilities*. Times Books.
- Vail, P. L. (1987). *Smart Kids with School Problems: Things to Know and Ways to Help*. New York: E.P. Dutton.