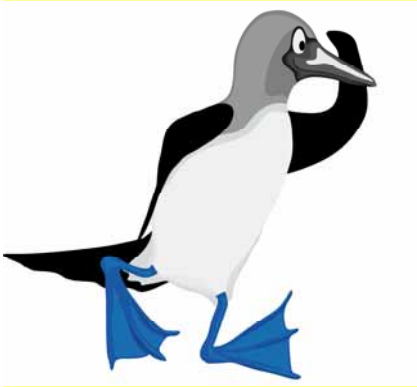
Adolescents with Motor Difficulties: A Resource for Educators



Shawn is in his first year of high school, and is very frustrated. He has difficulty with all written work. Shawn is often late for class, books and pencils are frequently left behind and individual papers are "lost" in his locker. He is a good reader, and does well with oral assignments. His contributions in English class are well thought out, however few written assignments are completed. Other than computer, all of his teachers have expressed concern regarding his performance. Shawn hates physical education class and skips it much of the time. He has joined the computer club, and his only friends are two other members. All three are called "nerds" by other students. At home, he spends most of his time playing video games and computer games. His parents had hoped that the transition to high school would alleviate the difficulties of middle school, however he has continued to struggle academically and socially and they are very concerned.

Recognizing Motor Difficulties

What is DCD?

Developmental Coordination Disorder (DCD) is a medical condition in which there is marked impairment in the development of motor coordination, and the impairment significantly interferes with academic achievement or activities of daily living (DSM IV, 2000). DCD may exist in isolation OR may co-occur with other conditions such as language-based or non-verbal learning disabilities or attention deficit hyperactivity disorder. Students with DCD usually have average or above average intellectual abilities.

What will a teacher see if a student has DCD?

- The student may appear to be clumsy or awkward in his/her movements. He/She may bump into, spill or knock things over frequently.
- The student may experience difficulty with gross motor skills (e.g., running, climbing), fine motor skills (e.g., note taking, doing laces on gym shoes, managing chemistry equipment), or both.
- The student's motor skills might not match his/her abilities in other areas. For example, intellectual and language skills may be quite strong while motor skills are delayed.
- The student may have difficulty learning new motor skills. Once learned, however, certain motor skills may be performed quite well while others may be performed poorly.

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- The student may avoid or appear to be uninterested in particular activities, especially those that require physical activity (e.g., poor attendance in gym class, no extra-curricular physical activities).

- The student may experience secondary emotional problems, such as low frustration tolerance, decreased self-esteem and lack of motivation.

- The student may have difficulty with activities of daily living, for example, managing knapsacks, going on overnight or field trips, dressing for gym class.

WHAT CAN A TEACHER DO TO HELP A STUDENT PERFORM AT SCHOOL?

The most important thing a teacher can do to help a student reach his/her full potential is to make sure the task and the learning environment are right for the student. The following "M.A.T.C.H." strategy will help the teacher *match* the activity to the student.

M.A.T.C.H. the Activity to the Student

M odify the task
This involves *changing aspects of the activity* that are too difficult for the student to perform. The important thing about modifying a task is that the student can still experience success if they make a genuine effort to participate in the activity.

A lter your Expectations
Consider what the ultimate goal of an activity is and then think about where you can *be flexible*. Allowing extra time or alternate methods of completing a task can make the difference between a lesson learned and an experience of failure for a student with DCD.

T eaching Strategies
Students with DCD have full capacity to learn with their peers, but may require a slightly *different teaching approach*. Investigate alternate teaching strategies designed for students with special needs.

C hange the Environment
Pay attention to what is going on around a student when he/she is experiencing success or difficulty (i.e. noise, level of activity, visual distractions). Minimize or *change the environmental factors* that make performance difficult for the student.

H elp by Understanding
Understanding the nature of DCD will help you to problem solve and provide all of your students with rich learning experiences. *Ask* the student with DCD what might be helpful. If students feel supported and understood, they are more likely to attempt new activities and to persevere until they achieve success.

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High School

MATCH the Activity to the Student!

Modify the activity
Alter your expectations
Teach strategies
Change the environment
Help by understanding

What you might see…	How can you MATCH?
Difficulty with transitions to high school	Ask for information from elementary school
	Arrange for individual visits to the school ahead of time
	Ensure a specific staff person is assigned to the student
	Develop a timetable that is balanced across terms
	Ask an older student to be a buddy
	If the student is taking public transportation, use a bus pass rather than individual tickets
Difficulty keeping up with volume of writing	Decrease expectations regarding volume of homework
	Reduce the amount of copying from the board or text
	Provide printouts of notes ahead of time
	Permit audiotapes to be made of lectures
	Arrange for another student to scribe, then photocopy notes
	Use a laptop computer as needed (a system will need to be in place for saving and transferring work, recharging and printing from the laptop)
Difficulty with self-organization – books, papers, getting to class on time, meeting deadlines	Place the student's locker in a central place
	Arrange for a key lock rather than a combination and provide a spare locker key (keep key on string)
	Provide organizer software, colour-coded disks or memory sticks for different subjects, set up the system with the student, and explicitly teach the student to use it
	Encourage use of one large zippered binder with tabs for subjects
	Allow for the use of notebooks, not individual papers
	Post extra copies of the student's timetable in their locker
	Suggest that an extra pencil case is kept at home
Difficulty completing homework	Ensure clear communication between home and school
	Have a buddy network with phone numbers
	Provide essay templates and the use of study techniques
	Provide time at the end of each day to ensure that the student has: 1) a written list of the homework, and 2) textbooks and notebooks needed for homework in his / her bag

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(continued) What you might see...	(continued) How can you MATCH?
Difficulty completing exams	Provide extra time in exams
	Allow the student to complete exams in another room
	Allow the student to write the exam on a laptop
	For practical exams, provide extra time to practice
Avoidance of physical education, extracurricular sports	Ensure that the student has sufficient time before and after gym for changing or schedule gym first thing or at the end of the day so student only needs to change once
	Encourage use of fitness machines and weight room – introduce equipment to the student on his/her own or in a small group
	Buddy with an older student to target some fitness goals
	Encourage involvement in other intramural activities – drama, martial arts, music, photography, computers, debate team
Difficulty with motor aspect of subjects	Try a roller ball pen instead of ink pen
	Allow the student to use his/her own fingering for keyboarding
	Have the student work in pairs for subjects such as chemistry
	Provide adapted tools – e.g. ridged ruler, pens with rubber grippers, non-slip mat under protractor (math) or bowls (food sciences), graph paper for lining up math problems
	Provide pre-drawn maps in geography, a scribe to draw objects in art
	Consider classes that will be a good fit, given the student's abilities and challenges
	For co-op courses, have the student practice tasks in school first

If a student is still experiencing difficulty performing motor tasks despite your best efforts, consider speaking with his/her parents about making a referral to a health professional.

WHO ELSE SHOULD THIS STUDENT SEE?

Encourage the family to see their family physician. It is important that a medical practitioner rule out other conditions that might explain the student's motor coordination difficulties. Physicians or psychologists may also need to become involved with students who are struggling with mental health issues such as depression and anxiety.

A physician, teacher or parent can refer the student to an occupational therapist. Occupational therapists (OT) are educated and trained in analyzing motor skill development and also in

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determining the ability of a student to cope with the demands and activities of everyday life. The OT will observe and assess the student and may then make recommendations including: specific strategies for handwriting and classroom tasks; tips to make self-care tasks easier; activities to improve the student's motor coordination; ideas for community leisure and sports activities; and techniques to ensure that the student experiences success.

A referral to a physiotherapist may also be appropriate if the student has gross motor difficulties (balance, running, stair climbing and other forms of physical activity).

References and Further Information

The term "Developmental Coordination Disorder" (DCD) has only recently received the attention and acceptance of practitioners and researchers in health care and educational fields. Very little has been published about students with DCD in professional journals and even less has been written in the popular press or parenting magazines. A synopsis of many of the books that are relevant for individuals with DCD is available on the *CanChild* website.

For more information about children and adolescents with DCD, visit the *CanChild* Centre for Childhood Disability Research website:

www. canchild.ca

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