

## **Guidelines for the Effective Use of Educational Software with Students who have ASD and or other Developmental Disabilities**

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Educational software can be a valuable component in the array of methods and materials used to teach students who have Autism Spectrum Disorders and/or other developmental disabilities. The use of the computer and educational software provides several advantages to the learner:

- The computer screen is a visual medium which allows the student to access her/his strength in the visual modality.
  - Computer programs offer unlimited opportunities to review concepts. Repeated trials allow opportunities to refine or consolidate a task or skill sequence.
  - Software programs that have been created for students who have learning difficulties generally maintain consistency in the language of instruction and in the program routines, as well as provide an element of predictability in how exercises will be presented.
  - Most educational software eliminates the need for using a pencil, particularly in the area of Mathematics. Many students with ASD and other developmental disabilities have significant difficulty using a writing tool, which can seriously interfere with task performance. When the pencil is removed from the learning experience, it frees the student's focus and cognitive energy to deal with task expectations rather than struggle with numeral or letter formation.
  - Working with educational software allows for a focused instructional experience.
  - When software can be shared between school and home, the student may be more able to generalize information from one environment to the other.
- There are some preliminary steps that instructors can take so that students can participate to the best of their ability and with a clear understanding of task expectations.
- Make an informed decision about the software program you choose for your student.
    - Ask other instructors about software programs their students have used.
    - Look at educational catalogues and brochures that advertise educational software.
    - Go to the websites of companies that sell educational software. Many of these websites include free downloads and/or demonstration videos that explain the programs and that can be trialed. Some sites also offer software manuals that can be downloaded.
    - Seek the advice of a software distributor who has a broad knowledge of what kinds of programs are available.
    - Check to see if your classroom computer, as well as your school board's computer systems, will be able to accommodate the program.
- When choosing educational software, preview its program components. Check to see if the cognitive level for intended users is indicated. It is critically important to study the software to

determine which elements of a program are appropriate for the student. There are some important questions to ask in this process:

- Does the student have the pre-skills necessary to engage in the program?
- What kinds of software has the student used in previous situations?
- How did the student respond to other software programs?
- Are there components of the program which may be too easy or too difficult for the student?
- Does the program include audio? Does it give verbal task instructions? Are instructions clear and simple or do they involve two or three steps?
- Does the student have adequate receptive language skills to understand the instructions or will they need further explanation by an instructor (perhaps put into a printed or written format)?
- Is there a reading component to the program? Are the student's reading skills adequate for effective participation in the program?
- Look for the software features that are most useful for students with ASD/DD:
  - Clear visual images that do not veer too far from reality: either photographs or accurate drawings
  - Well-articulated and clear language of instruction
  - Single-step instructions whenever possible
  - The availability of Pause and Repeat features
- Scaffolded tasks that do not become too complex too quickly
- Task review opportunities
- Tasks that allow the student to work independently
- Check the technical requirements of the program. Can the technical components be manipulated, e.g. voice, length of time between tasks, mouse, touch screen, keyboard or switch capability? Determine which method of access will be most efficient for your student.
- Does the program have a data collection component? Can it be printed? Can the student participate in her/his own data collection process?

There is a vast array of educational software available which addresses the broad spectrum of academic and social needs of students with Autism Spectrum Disorders and developmental disabilities. This software can be an extremely useful component in a well-rounded and comprehensive educational program for our students.

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