**Students in CTE Programs Reading Below Level: Support for the CTE Teacher**

Many students coming to CTE programs read below expected level. This can be a function of a reading disability or difficulty with the English language. There is a need to provide resources for CTE teachers to assist their students with reading.

A variety of factors have occurred in recent years that have resulted in an increase in the number of students with disabilities (SWD) accessing CTE programs. Federal legislation has led the way by mandating access. Also, technological advances have resulted in many adaptations that enable SWD to fully participate in numerous programs and occupations. The costs of many of these adaptations have decreased significantly enabling them to be available to more students.

Employer expectations have also changed significantly in recent years. Changes in the academic requirements of occupations and the increased expectations by employers for lifelong learning result in greater needs for competence in reading by CTE students.

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**10 Points About Your Students Potential to Read**

1. They may have little or no support at home to encourage reading
2. Modifications and/or adaptations may neutralize the reading difficulty
3. You may need to address a student's reading anxiety first
4. The teacher is a positive reading role model for students
5. Extensive technology is available to support reading usually at little or no cost.
6. Student behaviors may reflect reading ability
7. Existing reading data on individual students may be available through your school's student information system to establish a history of student's reading levels and progress
8. Interest can motivate students to engage in reading
9. Multi-modal exposure to course content and key vocabulary solidify information and help build foundational knowledge
10. Students want to be successful
However, when it comes to assisting students who read below grade level, many CTE teachers face a number of challenges, namely: i) assessment of student’s reading capacity, ii) incorporating reading instruction in classrooms, laboratories and youth organizations; iii) locating resources to assist them and iv) providing necessary accommodations and modifications for students.

The purpose of this link on the cteproject.com website is to provide resources for the CTE teacher to assist students who read below grade level. It is intended to provide an overview of the subject and resources the CTE teacher can use to support reading in a CTE program. It is recommended the CTE teacher begin using this resource by linking to the section on assessing student’s reading capacity. Specifically, the links include information on:

1. Assessing student’s reading capacity

2. How to incorporate reading instruction in a CTE program

3. Sample CTE case studies

4. Technology Support: assistive technologies and available web resources

1. **Assessment of Student’s Reading Capacity**

How will you know if your students are reading below level? Reading ability is often reflected in a student’s behavior and performance. The following are some indications that reading may be a challenge for a student:

- Acts up in class to get out of reading
- Angry or frustrated when called on to read
- Frequently makes negative comments about reading
- Tries hard to read but has little success
- Numerous excuses to avoid reading
- Has difficulty staying on task when reading
- Struggles with vocabulary especially large words
- Struggles with fluency – reading with ease
- Rushes through reading assignments

For additional information, see Reading Horizons (www.readinghorizons.com)

2. How to Incorporate Reading Instruction in a CTE Program

CTE teachers often teach with the intention of improving reading and promoting learning in three different settings: the classroom, the laboratory, and in youth organizations. This section identifies instructional strategies and how to utilize technology to assist students who read below level.

2 a) Classroom Support

In the classroom, CTE teachers can read aloud to the students (see Case Study #1), assign independent readings at appropriate readability level, provide opportunities for students to read one-to-one and confer, divide reading assignments and have students share responsibilities for reading smaller portions to share with the class (Harwayne,
The materials used for reading need not be limited to curriculum texts. Other materials could include cartoons, magazines, and related fiction and non-fiction books.

Similarly, in the lab, CTE instructors can use worksheets with aural instructions and procedures on how to complete the task. Students may also be asked to read text presented in various formats, such as reading lab manuals, lab rules and procedures, and safety posters as part of teaching reading skills.

Often the CTE teacher needs to make accommodations and/or modifications for a student with a disability. These are typically spelled out in the Individualized Education Plan (IEP). Accommodations refer to any alteration of existing facilities or procedures to make them more readily accessible to persons with disabilities. Modifications are changes in form by reducing or lessening in degree or difficulty. This may include reducing the length of a document. In all cases these adaptations, accommodations, and modifications need to be individualized for students, based upon their needs, their personal learning styles, and interests. For more information on this subject, click **HERE**.

**Supporting the IEP as it Relates to Reading**

An IEP might state that CTE teachers and Intervention Specialists will collaborate to provide SWD:

- extended time for tests and assignments
- modified tests and assignments
- tests read aloud, including directions and test answers (multiple choice tests)

- a quiet environment in which to test

- assistance with note taking

- assistance with reading

- assistance with vocabulary acquisition

- assistance with written work

- direct instruction

**2b) Support for Instructional and Curriculum Planning**

Supports for Instructional and Curriculum Planning including common Accommodations and Modifications

- guided notes (*see Case Study #2*)

- re-teach and monitor for understanding

- corrective feedback provided by the instructor

- negotiate specific time allowed for “extended time”

- negotiate specific modifications of tests and assignments

- read information aloud

- time allowance for processing new concepts

- present information using a variety of modalities
- simplify multi-step instructions

- provide multiple trials to reach competency or completion

- model desired skills

- repeated practice

- excused from high stakes consequences of assessments, when possible

3. Sample Case Studies

The following case studies are excellent examples of how CTE teachers have addressed the needs of students who read below level.

**Case Study #1:**

The Heating, Ventilation & Air Conditioning (HVAC) Career and Technical Education program teacher realized the majority of his students were reading below grade level.
and did not read outside of class for leisure. He decided to address the issue through the reciprocal skill of writing. He used the HVAC News, an industry classroom magazine and asked students to choose an article to read, and then write a summary, plus personal comments. The HVAC student publication sparked interest and although the written responses varied in length and quality, it was a catalyst for professional dialogue. The instructor awarded “credit” for the assignment and offered additional points for edits and re-writes.

**Case Study #2:**
The Biomedical Science Career and Technical Education program teacher knew the content of her subject matter was difficult for even her best readers. She created guided notes for her class that accompany the lectures. Guided notes are notes created by the teacher containing only the essential elements of each lesson. Portions of the notes are left out, similar to the “cloze” method, and are filled in by students while the lecture is delivered. This allows for clear communication between teacher and student regarding components relevant to the subject and provides a format for students to participate in note taking without becoming overwhelmed.

**Case Study #3:**
The Automotive Technology Career and Technical Education program teacher has students who are more skilled with hands-on activities than reading. He uses the “First Five/Last Five” approach to build vocabulary necessary for successful dialogue in his program. Ten to fifteen key vocabulary words are selected each day. The instructor says each of the vocabulary words aloud, while the students repeat the words back in
choral response. Attention is given to diction, enunciation, number of syllables, and finally meaning. Students are then paired (strong reader with below grade level reader) to work on class assignments together, using combined modalities of discussion, reading, and hands-on.

4 Technology Support

It is important for CTE teachers to know that extensive technology is available to assist them in supporting reading for students who read below level. Most of this is available at little or no cost. The following assistive technologies and web resources are a sample of the available technology.

4a) Assistive Technologies

There is a wide range of assistive technologies (AT) or tools available to help individuals who struggle with reading. Assistive technologies can be items, piece of equipment, or product systems, whether acquired commercially off the shelf, modified, or customized, used to increase, maintain, or improve the functional capabilities of a child with a disability (Stanberry & Raskind, 2009). While each assistive technology works differently, in general, assistive technologies break down barriers to full literacy in two ways: as a reading support, meaning that computer-based applications help students with learning disabilities successfully access grade-level text as they read, and as a reading intervention, meaning that the technology helps students strengthen and improve their overall reading skills (Hasselbring & Bausch, 2005).

Some of the common examples of AT from Stanberry and Raskind (2009) include:
• Audio books & publications

These are recorded books which allow users to listen to text. They are available in a variety of formats (e.g., audiocassettes, CDs, and MP3 downloads). These days, most of AT allow users to playback and rewind pages.

Reading tools and programs specific to persons with learning disabilities in reading include software and hardware designed to make text-based materials more accessible to people who have difficulty with reading. Options can include scanning, reformatting, navigating, or speaking text out loud. These programs are helpful for those who have difficulty seeing or manipulating conventional print materials; people who are developing new literacy skills or who are learning English as a foreign language; and people who comprehend better when they hear and see text highlighted simultaneously, e.g. leap pad.

• Paper-based computer pen

This technology records and links audio to what a person writes using the pen and special paper. It enables the user to take notes while simultaneously recording someone (e.g., a teacher) speaking. The user can later listen to any section of his notes by touching the pen to his corresponding handwriting or diagrams. This type of tool may benefit people who struggle with writing, listening, memory, and reading.

• Reading Pen
Reading pens are portable learning tools to assist students with reading. The pens can scan text, and students hear it spoken aloud and obtain definitions and correct pronunciation within seconds. Ideal for students learning a second language and for people with reading difficulties (such as dyslexia). They provide reading autonomy and fluency, & enhancing text comprehension.

- **Speech synthesizers/screen readers**

These systems can display and read aloud text on a computer screen, including text that has been typed by the user, scanned in from printed pages (e.g., books, letters), or text appearing on the Internet. This type of tool may benefit people who struggle with reading and writing.

- **Screen enlargers, or screen magnifiers,**

These work like a magnifying glass for the computer by enlarging a portion of the screen which can increase legibility and make it easier to see items on the computer. Some screen enlargers allow a person to zoom in and out on a particular area of the screen.

- **Screen readers**

They are used to verbalize, or "speak," everything on the screen including text, graphics, control buttons, and menus into a computerized voice that is spoken aloud. In essence, a screen reader transforms a graphic user interface into an audio interface.
Screen readers are essential for computer users who are blind.

- **Text-to-Speech (TTS) or speech synthesizers**

Speech synthesizers receive information going to the screen in the form of letters, numbers, and punctuation marks, and then "speak" it out loud in a computerized voice. Using speech synthesizers allows computer users who are blind or who have learning difficulties to hear what they are typing and also provide a spoken voice for individuals who cannot communicate orally, but can communicate their thoughts through typing.

- **Talking and large-print word processors**

These allow the use of speech synthesizers to provide auditory feedback of what is typed. Large-print word processors allow the user to view everything in large text without added screen enlargement.

For additional information on inexpensive assistive technologies for struggling readers, see article by Reisberg (2005).

**4b) Annotated List of Web Resources.**

Readers are encouraged to forward any websites useful for teaching reading in the CTE program. These can be submitted through the feedback form on:

**Askjan.org** (www.askjan.org)

This is an excellent website resource that identifies specific accommodations needed for specific occupations. CTE teachers can easily determine the types of accommodations they can make to assist students with disabilities in their programs.

**Children of the Code** (www.childrenofthecode.org/)

Website features over 100 short video interviews from students who struggle with reading and leaders in the field of literacy. This site may help with understanding struggling readers and reading as a crisis. Reading affects the social, emotional, academic, political, and economic aspects of a community and each individual within. Education and understanding are a starting point for supporting the success of students for whom reading does not come easy. Use this resource to empower yourself in the classroom.

**TeacherVision** (www.teachervision.com)

A free site containing instructional and curricular supports in the form of graphic organizers, lesson plans, professional development articles, classroom management tips, teaching strategies and much more. It is organized and full of just what you are looking for to convey your subject's content to the students you serve. TeacherVision offers resources by grade level, subject, and theme. It also includes educational slide shows. There are several features specifically intended for supporting students with Special Needs, particularly in the Classroom Management tab under Behavior Management. There is a cornucopia of support here for teachers striving toward excellence.
**Reading Horizons** ([www.readinghorizons.com](http://www.readinghorizons.com))

This website has extensive resources related to teaching and learning to read especially for struggling readers. Articles, videos, blogs, teaching tips and on-line workshops are available. Topics include reading readiness and intervention, summer reading strategies, English language learners, teaching dyslexic students and many more.

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The Bookshare.org library provides print disabled persons with access to over 41,000 books and 150 periodicals that are converted to Braille, large print or digital formats for text-to-speech audio. Bookshares.org enables book scans to be shared, thereby making them available to all the collections of thousands of individuals who scan books.


OhioReads is an education initiative to improve the reading skills of K-4th grade students so they can read at grade level before leaving elementary school. It is a statewide, grassroots reading initiative that brings volunteers into the classroom to serve as reading tutors to K-4th grade students. The initiative is a partnership of schools, businesses, community organizations, libraries, parents, educators, and students working together to improve reading skills.

**Resources/References**

