

Navigating Accessible Educational Materials: Accessible Formats

Guiding Questions for the Decision-Making Team

Step 2: Select the appropriate accessible format

Step 2 includes four areas for consideration. The following questions under each will help a decision-making team deliberate which type(s) of accessible format are appropriate for a student.

Guiding Questions for Step 2.1: The team considers the full learning context

What aspects of a student's current skills should the team consider?

- **Vision and visual skills:** Students who are blind or visually impaired who cannot read text-based materials will need alternative ways to access educational materials. Additionally, some students who are not visually impaired as defined by IDEA may have visual field or visual tracking deficits which affect their ability to use printed text.
- **Reading skills:** Students with reading disabilities, such as dyslexia, experience barriers to reading text-based materials without supports or alternative means for accessing the content.
- **Motor skills and physical stamina:** A student's ability to hold books and turn pages should be considered, as well as strength and physical stamina to read for long periods of time.
- **Expressive and receptive language skills:** A student's language skills affect his/her ability to understand text-based materials and should be considered.
- **Listening skills:** A student's ability to listen and remember what is heard through listening should be considered. Formal and informal tests of listening comprehension, auditory memory, and other listening skills may be used.
- **English skills:** Considerations for a student with a disability who is learning English include the extent to which the student comprehends information through varied formats and media.
- **Memory:** A student's short-term and long-term memory abilities should be considered by the team.

What aspects of a student's current performance should the team consider?

In reviewing information about a student, the team should review past student performance and address questions such as "What aspects of the student's performance will change as a result of the use of accessible formats in the curriculum?" All areas of the curriculum should be considered. For example, the team may want the student to access information more quickly, to understand the information with more accuracy, or to gain information more independently.

What aspects of a student's previous experience should the team consider?

If the student has a history of using one or more accessible formats, performance data related to that use can help the team decide if the same or different formats are needed. Additionally, the student's background knowledge of the content should be considered. If the content is complex or entirely new to the student, it may present multiple learning challenges.

What aspects of the student's preferences should the team consider?

Students should always be consulted about their preferences. Whenever feasible, the team selects formats that the student prefers. In some cases, students should be required to try a new format for an extended trial period to determine whether it has benefits that the preferred format does not offer. Students often need to have experience with a variety of accessible formats before they can make an informed decision about the one(s) they prefer most.

Does the age of a student impact the format(s) that the team should consider?

Children who are blind, visually impaired, and/or have physical disabilities develop an interest in reading the same way all children do. Rich experiences and explorations of a variety of reading materials are essential to early literacy development. There is no set minimum age at which children should begin using accessible formats.

What specific aspects of a student's ability to listen should be assessed when considering accessible formats?

A listening assessment may include factors such as the student's level of understanding and comprehension when text is read aloud, the student's ability to repeat specific words or phrases heard, and the length of time the student can listen with understanding.

How does the way that instruction is delivered in various environments impact the selection of accessible format(s) for a student?

The team considers the following variables

- Materials that will be needed in more than one environment (e.g., home, school, community, multiple classes)
- Portability and flexibility of various formats and the technology the student will need to access them

- Types of required reading tasks (e.g., independent and shared reading in various environments at school, reading at home, reading for community activities)
- Types of visual representations in the content (e.g., maps, charts, diagrams, and math notation)

What aspects of the environments in which accessible formats will be used should the team consider?

The team considers the following variables:

- Environments where the student will need access to the curricular content (e.g., school, home, or community-based educational programs or apprenticeships)
- Lighting in the environment
- Noise in the environment
- Availability of needed technology and power sources

What aspects of the tasks for which accessible formats will be used should the team consider?

The team considers the following variables:

- Nature of the task
- Complexity of the task
- Length of the task
- Type of response expected (e.g., annotation, multiple choice, fill in the blank, written response)

What aspects of the educational materials for which accessible formats will be used should the team consider?

The team considers the following variables:

- Length and complexity
- Genre (e.g., fiction or nonfiction, math, science)
- Visual representations (e.g., photos, charts, or other graphics)

Guiding Questions for Step 2.2: The student trials a range of formats

What is the range of accessible formats a team should consider?

By definition, “accessible format” is an inclusive and functional term rather than a list of prescribed types of materials. While no specific formats are listed under the definition,

customary formats for consideration are braille, tactile graphics, large print, audio, and digital text.

What are sources of accessible formats for the purpose of student trials?

Examples of relevant file formats include:

- Tactile formats, such as braille (hard copy and digital) and raised images
- Large print formats, which are hard copy materials with large text size
- Audio formats, such as human-narrated audio recordings
- Accessible digital formats such as
 - Accessible EPUB documents
 - Accessible web-based (HTML5) documents
 - Accessible Word documents
 - PDF/Universal Accessibility (UA)
 - Accessible documents with MathML

Reach out to your [State AEM Contact](#) for suggestions on how to access accessible format files for the purpose of student trials.

What aspects of the student's performance during trials should the team consider?

Teams can evaluate a student's performance during trial periods and instruction in the use of an accessible format. Information collected can help a team decide which accessible formats are most effective for student use in a particular task. Data that might be collected during instruction in the use of a format or during trial periods might include the amount of time it takes the student to use each format option and the student's level of independence in the use of each format.

Guiding Questions for Step 2.3: The team selects the accessible format(s) needed

Why would a team consider the braille format for a student?

Braille code is a tactile system of raised dots that enables students who are blind or visually impaired to read through touch. When braille provides a student with a visual impairment with the best means to develop literacy skills in order to access information, communicate efficiently and independently, and participate in all educational activities, then braille is selected as the student's primary learning medium. This decision is based on a systematic and objective evaluation process. Sources of information include a clinical low vision evaluation, a functional vision assessment, a learning media assessment, and the student's progress in the educational program. The team analyzes and considers the information in a variety of contexts, including the

student's current and future needs. [Paths to Literacy has useful information about choosing braille as a reading medium.](#)

Why would a team consider tactile graphics as a format for a student?

Tactile graphics convey non-textual information to people who are blind or visually impaired. These may include tactile representations of pictures, maps, graphs, diagrams and other images. Braille users need to develop proficiency in interpreting tactile graphics in order to understand visual illustrations used in teaching and learning activities. The availability of tactile graphics for mathematics and science is especially important for students who need this format. [Paths to Literacy has useful information about the use of tactile graphics.](#)

Why would a team consider the large print format for a student?

Large print format is provided in a hard copy document containing a font size of 18 points or larger. Additional formatting considerations pertain to styles used for font face and punctuation; format options; use of color; paper selection; and document size. For a with a visual impairment who uses print for reading and writing, the team considers the use of large print through an evaluation process to determine the print media the student will use to develop literacy skills. This objective evaluation process (which is similar to the process used to determine the use of braille) includes information from a variety of sources, such as a clinical low vision evaluation, a functional vision assessment, and a learning media assessment emphasizing print media and efficient reading skills. A variety of factors are included in the decision-making process such as eye condition, type of vision loss, reading speed, comprehension, print size, and individual student goals. Large print may be a student's primary or secondary learning medium depending on task and context. For example, large print may be most appropriate for a print textbook, but not necessary for access to digital text where many print features can be adjusted and customized to student preferences.

Why would a team consider an audio format for a student?

Audio format is human-recorded or synthetic voice narration to present information. Audio can be stored and transmitted through both analog and digital means. By listening to content, students can reduce the cognitive load of trying to read text or braille and can focus on comprehension of the information. Decisions are made based on a student's needs, the environments in which tasks will be completed, and the nature of tasks the student needs to accomplish.

Why would a team consider a digital text format for a student?

Digital text format refers to accessible file formats that contain both text and images. An accessible digital text file must be usable by the student requiring this format. Examples of file types include accessible EPUB, HTML, MathML, and tagged PDF. Accessible digital text is often

displayed on computers and mobile devices with text-to-speech software that has the ability to easily provide text and audio simultaneously or separately. This format not only provides flexible access to the information, but many text-to-speech software programs also have built-in learning supports that can increase learning and literacy for some students.

Guiding Questions for Step 2.4: List the educational materials used in the student's classes across the curriculum

What are some examples of materials that might be listed in this section?

The team should take a systematic approach by listing the student's subject areas or classes. For each, identify and list the print and digital materials used. Examples include textbooks, trade books, websites, magazines, newspapers, and teacher-created materials.

What information should be provided for each material listed?

For each material listed, categorize according to:

- **Licensed under copyright:** This will typically be a textbook or related instructional material procured from a publisher. Record the ISBN, which is typically found on the first few pages of the material. The ISBN is important for the process of acquiring an accessible format of the material.
- **Licensed under Creative Commons:** These materials are commonly known as Open Educational Resources (OERs). A material that is openly licensed under Creative Commons can be converted to other formats for all students, following the license information. [Learn about the various Creative Commons licenses.](#)
- **Available in the public domain:** These materials are owned by the public, such as educational materials developed with public tax dollars. A material in the public domain can be converted to other formats for all students, following any possible restrictions. [To learn about public domain, visit a page on the topic at Stanford Libraries.](#)
- **Teacher-created:** Materials created by teachers can be remediated for accessibility and provided to all students. Schools can be proactive and train all teachers on basic techniques for creating accessible digital materials, such as documents, websites, slide decks, and videos.

Guiding Questions for Step 2.5: Match accessible formats to materials

Under what circumstances might a student need a material in two or more formats?

Students may need one primary accessible format for many tasks, but a variety of factors—including environments and tasks—may indicate a need for the same material in more than one

accessible format. For example, a student may need one format for use in classrooms and another for homework at home. While a student may be able to use audio to listen to a novel while commuting, the student may also need an accessible digital text format to see and hear text simultaneously while writing answers to questions at home. In addition, if a student is in the initial stages of learning how to use a format such as braille, the student may need to use the newly learned format for some tasks while using a more familiar format for other tasks.

What should happen if the student disagrees with the format(s) selected by the rest of the team?

As with any other educational decision, the best means to determine which educational strategy is most beneficial for a student is to try both and collect data about the results of its use. Data-based decisions about accessible formats should take into account the specific tasks a student needs to perform and the change in student performance that the team hopes to see as a result of the use of accessible formats. Also, it may be that a student needs different formats for different tasks.

These questions and answers originated from the AIM Navigator, a tool developed by the National Center on Accessible Instructional Materials (AIM Center) and later maintained by the National Center on Accessible Educational Materials (AEM Center). They were updated for use in this module.