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FOCUS on Results **offers valuable, up-to-date information for special education stakeholders, including parents, teachers, school administrators, counselors, and others.**

Students who struggle to read because of physical, sensory, cognitive, or learning differences may need instructional materials in accessible, specialized formats that provide meaningful and equal access to the general education curriculum. Such access is guaranteed in federal education statutes, including the *Individuals with Disabilities Education Act* (IDEA) and *No Child Left Behind* (NCLB).

This *FOCUS on Results* article defines accessible instructional materials (AIM), outlines the paths available to students who are eligible to receive materials, and highlights the importance of expanding AIM availability.

Students Can Benefit From Accessible Instructional Materials (AIM)

by Jeff Diedrich

Think back to those times when, upon returning to school in the fall, there was a brand new textbook waiting for you—no bends, no marks, you were the first person to write your name in it. Now imagine not being able to access the content because of a visual impairment or print disability. The first day feeling changes to anxiety rather than excitement.

Students with a visual impairment or print disability may have to wait several weeks or even months to get the materials in a format they can use and learn from. In the meantime, students feel unprepared and risk falling behind their peers.

In most schools, the use of print-based instructional materials, mostly textbooks, is still primarily how teachers deliver curricular content. This system works fine for many learners. But for others—those who struggle to read because of physical, sensory, cognitive, or learning differences—such materials are not as

effective for learning. These students need instructional materials in accessible, specialized formats in order to have meaningful and equal access to the general education curriculum. Such access is guaranteed in federal education statutes, including the *Individuals with Disabilities Education Act* (IDEA) and *No Child Left Behind* (NCLB).

This *FOCUS on Results* document defines accessible instructional materials (AIM), outlines the paths available to students who are eligible to receive such materials, and highlights the importance of expanding AIM availability.

What Are Accessible Instructional Materials (AIM)?

AIM are specialized formats of fully accessible textbooks and other curriculum materials that can be used by and with students who are struggling readers or otherwise unable to access printed text. Fully accessible means:

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- All text is digital and can be read with text-to-speech, modified with regard to font size, and navigated by unit, chapter, section, and page number (or other appropriate segments).

- Images include alternative text and long descriptions when appropriate (alternative text is a replacement for an image that serves the same purpose as the image itself. It is read by a screen reader in place of the image).

- Math equations are provided as images with alternative text or in the content file using MathML.

- Content reading order, levels, and headings are determined by publisher tagging.

- Text can be converted into Braille.

The Need to Expand Accessible Instructional Materials (AIM) Availability

If a student is unable to use printed text effectively, he or she may require instructional materials in specialized formats. Determining this need for AIM is the first step toward ensuring that ALL students have the learning materials necessary for participation in activities that lead to educational achievement.

With today's classrooms more diverse than ever, grade level content expectations (GLCEs) more rigorous, and the expectation that ALL students achieve at high levels, educators face great challenges. If we continue to rely on printed text as the main, and often only, source for delivering educational content, then we have failed our students. A struggling reader who does not have efficient access to printed text may be unable to participate in classroom discussions or complete assignments. In addition, students may "tune out" due to lack of engagement.

Every student has a different learning style, and AIM afford the flexibility to meet the needs of a broad range of students. Results from the 2007 National Assessment on Educational Progress (NAEP) and the Michigan Educational Assessment Program (MEAP), outlined in Table 1 below, demonstrate the need to expand availability of AIM to all

Table 1: Assessment Results for Michigan Students

The 2007 National Assessment on Educational Progress (NAEP) Yielded the Following Results

	2007 NAEP Results for Public School Students—Percentage of All Michigan Students With Disabilities Reading Below the Basic Achievement Level	2007 NAEP Results for Public School Students—Percentage of All Michigan Students Except Students With Disabilities Reading Below the Basic Achievement Level
Fourth Grade	**64%**	**31%**
Eighth Grade	**66%**	**24%**

The 2007 Michigan Educational Assessment Program (MEAP) Yielded the Following Results

	2007 MEAP Results—Percentage of All Students With Disabilities Reading Either at Level 3 (Partially Proficient) or Level 4 (Not Proficient) Achievement Level	2007 MEAP Results—Percentage of All Students Except Students With Disabilities Reading Either at Level 3 (Partially Proficient) or Level 4 (Not Proficient) Achievement Level
Fourth Grade	**43%**	**12%**
Eighth Grade	**60%**	**18%**

students. The gap between students with disabilities and students without disabilities is striking. Yet, the high percentage of students without disabilities reading below grade level is alarming. This signals a need for these materials to be available for all students, including those without a diagnosed disability who are not currently guaranteed access to AIM.

While educators work to improve students' reading skills, students have the right to access the general curriculum in alternate ways. Students with limited reading skills can still think, comprehend, learn concepts, and be successful in reading-intensive classes such as science and social studies. AIM are not intended to replace good reading instruction, nor should remediation of a print disability cease. But, there must be an appropriate balance between remediation and the availability of alternative options. If the goal is to learn American history, should we penalize struggling readers who are unable to access the content? Or should we offer an alternative format that allows students to access the same content as their peers without accessibility issues? This is a new way to deliver content, which is unfamiliar to many educators. Coupled with assistive technologies, these materials provide a powerful solution. AIM may provide the opportunity for struggling readers to have equal access to a free, appropriate public education (FAPE) and to fully demonstrate their skill levels.

Determining Eligibility

Not all students will be eligible for or benefit from accessible instructional materials. Roughly speaking, two to three percent of the student population will be eligible to receive AIM under the *Copyright Act of 1931 as Amended*. Additional students may require AIM to make progress in the general education curriculum and seek solutions through different routes, including commercial options. See Figure 1 on Page 5 for eligibility criteria.

The first step is to determine if a need for AIM exists. The individual student's

What Are NIMAS File Sets?

National Instructional Materials Accessibility Standards (NIMAS) file sets are a universally accepted standardized file format for accessible materials that has been endorsed by the U.S. Department of Education. A NIMAS file, often referred to as a "source" file, can be converted into Braille, large print, digital/electronic text, and/or audio. NIMAS file sets provide a method for publishers and accessible media producers to develop the specific individualized accessible materials needed by a student.

What Is the NIMAC?

The federal Office of Special Education Programs (OSEP) funded the National Instructional Materials Access Center (NIMAC), an organization created through amendments adopted to the *Individuals with Disabilities Act* of 2004, to be the repository for NIMAS file sets submitted by publishers. NIMAC was set up to improve timeliness of delivery of accessible formats by reducing the time it takes for a source file to get into the hands of the accessible media producer (whose job is to convert the file into the instructional product desired).

Section 504 Plan—Section 504 is a component of the U.S. Rehabilitation Act of 1973 and protects the rights of individuals with disabilities in programs and activities that receive federal funds from the U.S. Department of Education. Section 504 regulations require a school district to provide a "free appropriate public education" (FAPE) to each qualified student with a disability who is in the school district's jurisdiction, regardless of the nature or severity of the disability. This may be defined as regular or special education services. Section 504 does require development of a plan, usually referred to as a 504 plan. The Individualized Education Program (IEP) of IDEA may be used as the 504 plan. Typically, a student who needs 504 services needs accommodations and/or related services but does not need special placement or instruction from a special education teacher. *Source: The Center for Applied Special Technology*

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Individualized Education Program (IEP) team (or other decision-making team) should review the student's evaluation information and present levels of achievement to determine whether the student has a disability-related problem using print-based core instructional materials. If the team determines a need, step two is to decide on the necessary accessible format(s) the student will need in various courses and environments. It is unlikely that one particular format will meet the needs of the student in every environment. For instance, in some classes a student with a visual impairment may require embossed Braille while in another environment an audio copy is more effective. The third step is to determine the appropriate route for acquiring needed formats (see Figure 1 on Page 5). Finally, the team must determine the additional assistive technologies needed, if any, and develop a plan to implement these technologies. The team must also develop a plan to train students, staff, and parents when necessary. It is essential that districts have a process in place to document the need for and distribution of AIM.

Obtaining Accessible Instructional Materials (AIM) for Students

Once a student is deemed in need of AIM, school districts are required to provide AIM. The path to acquire AIM depends on several factors.

Open to All Students:

• All students can access materials purchased directly from publishers or through other commercial options. Options to acquire core instructional materials commercially are limited at this time. However, some publishers are beginning to offer CD-based textbooks consisting of digital text and audio recordings of each page. Pearson Publishing recently announced fully accessible HTML-based textbooks for sale and use by anyone. Local educational agencies (LEAs) and intermediate school districts (ISDs) are strongly advised to purchase a commercial publisher

option, if available. This option gives schools the freedom to convert a book to multiple formats as needed without the burden of implementing a variety of copyright infringement procedures and safeguards. To convert a book, the purchased file must be in a flexible format (see Page 7 for a list of flexible file formats). By planning for a diverse range of student needs at the time of purchase, districts will be prepared to meet their obligations of providing FAPE under the IDEA. More importantly, districts will ensure that all students have the necessary tools to succeed.

• Another option, open to all students, is to obtain content from other free and fee-based providers, including online resources such as Audible.com.

Open to Students Eligible Under the *Copyright Act of 1931 as Amended*:

• To receive AIM from an accessible media producer (i.e. Bookshare.org, Recording for the Blind & Dyslexic, American Printing House), students must be eligible under this act.

Open to Student Eligible Under the *Copyright Act of 1931 as Amended* With IEPs:

• In order to be eligible for materials derived from National Instructional Materials Accessibility Standards (NIMAS) file sets—a universally accepted standardized file format for accessible materials that has been endorsed by the U.S. Department of Education—a student must have an IEP and be eligible under the *Copyright Act of 1931 as Amended*. A NIMAS file, often referred to as a "source" file, can be converted into Braille, large print, digital/electronic text, and/or audio. NIMAS file sets provide a method for publishers and accessible media producers to develop the specific individualized accessible materials needed by a student. The federal Office of Special Education Programs (OSEP) funded the National Instructional Materials Access Center (NIMAC), an organization created through amendments adopted to the *Individuals with Disabilities Act* of 2004, to be the repository for NIMAS file sets submitted by publishers. NIMAC was set up to improve timeliness of delivery of accessible

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Figure 1: Accessible Instructional Materials Eligibility

School districts are required to provide accessible instructional materials (AIM) to eligible students. The following table lists the criteria for eligibility and the sources in which to acquire AIM.

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Student With an Individualized Education Program (IEP)

Students Who Meet the Following Criteria:

☑ **Student With a Print Disability**
☑ **Student Meets *Copyright Act of 1931 as Amended* Criteria**

May Acquire From:
- **NIMAS File Sets**
- **Accessible Media Producers (AMPs) such as Bookshare.org, Recording for the Blind & Dyslexic, and American Printing House for the Blind (APH)**
- **Commercial Sources**

Student With a Section 504 Plan

Students Who Meet the Following Criteria:

☑ **Student With a Print Disability**
☑ **Student Meets *Copyright Act of 1931 as Amended* Criteria**

May Acquire From:
- **Accessible Media Producers (AMPs) such as Bookshare.org, Recording for the Blind & Dyslexic, and American Printing House for the Blind (APH)**
- **Commercial Sources**

Nothing in this section relieves a state education agency (SEA) of its responsibility to ensure that children with disabilities who need instructional materials in accessible formats, but are not included under the definition of blind or other persons with print disabilities in Section 300.172(e)(1)(i) of IDEA or who need materials that cannot be produced from NIMAS files, receive those instructional materials in a timely manner.

Students not eligible under the criteria established in the *Copyright Act of 1931 as Amended,* regardless of eligibility under IDEA or Section 504 of the *Rehabilitation Act,* but still requiring AIM, may acquire materials from commercial sources.

For more explanation on the need to broaden the availability of AIM for all students, please refer to the section "The Need to Expand Accessible Instructional Materials (AIM) Availability" on page 2.

Eligibility Criteria Under the Exemption Provided in 17 U.S.C. Sec. 121 of the Copyright Law

1. Blind persons whose visual acuity as determined by competent authority, is 20/200 or less in the better eye with correcting glasses, or whose widest diameter of visual field subtends an angular distance no greater than 20 degrees.

2. Persons whose visual disability, with correction and regardless of optical measurement, is certified by competent authority* as preventing the reading of standard printed materials.

3. Persons certified by competent authority* as unable to read or unable to use standard printed materials as a result of physical limitations.

4. Persons certified by competent authority** as having a reading disability resulting from organic dysfunction and of sufficient severity to prevent their reading printed materials in a normal manner.

* In cases of blindness, visual disability, or physical limitations 'competent authority' is defined to include doctors of medicine, doctors of osteopathy, ophthalmologists, optometrists, registered nurses, therapists, professional staff of hospitals, institutions, and public or welfare agencies (e.g., social workers, case workers, counselors, rehabilitation teachers, and superintendents).

** In the case of a reading disability from organic dysfunction, competent authority is defined as doctors of medicine who may consult with colleagues in associated disciplines.

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formats by reducing the time it takes for a source file to get into the hands of the accessible media producer (whose job is to convert the file into the instructional product desired).

School districts are obligated to adopt NIMAS but have the option to coordinate with the NIMAC. If Michigan districts choose not to coordinate with the NIMAC, they must submit a plan to the MDE as to how they will meet their obligations to provide AIM in a timely manner.

NIMAS Requirements for Districts

Availability of NIMAS Files—Asking Publisher for NIMAS Files:

If a district has chosen to coordinate with the NIMAS, they are required to include language in their contracts with publishers to have them submit NIMAS files to NIMAC as part of the transaction for all printed materials purchased (see boxed item below for sample language for purchase orders).

Professional Development for Teachers:

Providing accessible materials to an eligible student does not guarantee student achievement. In order to effectively use accessible materials, staff and students will likely require training. In addition, most electronic forms of these

Required Language for ISD/LEA Purchase Orders

By agreeing to deliver materials marked "NIMAS" on this contract or purchase order, the publisher agrees to prepare and submit, on or before (insert date) a NIMAS file set to the NIMAC that complies with the terms and procedures set forth by the NIMAC.

Should the vendor be a distributor of the materials and not the publisher, the distributor agrees to immediately notify the publisher of its obligation to submit NIMAS file sets of the purchased products to the NIMAC. The files will be used for the production of alternate formats as permitted under the law for students with print disabilities.

Additional (Optional) Language for ISDs/LEAs

The publisher agrees to provide or make available for purchase in lieu of the printed textbook an accessible version (e.g. NIMAS, unlocked PDF) for students who have print disabilities and are unable to access printed text but do not meet eligibility requirements under the *Copyright Act of 1931 as Amended*. If not available at this time, districts will seek a commercially available option. If no such option exists, an accessible version may be created by the district for the sole purpose of making the textbook accessible to eligible students in order to meet its obligation to provide a free, appropriate public education (FAPE). In such cases, a standard copy of the textbook will also be purchased. The (insert name) school district requires accessible instructional materials in order to meet the needs of students with print disabilities, and preference will be given to publishers who offer accessible textbooks as an option.

For additional language, visit www.cenmi.org/mits/resources/aimnimas.aspx.

materials will require assistive technology that can add needed supports. This, too, will likely require additional training for staff and students.

Making It Happen–What Educators Need to Know

In order to clearly communicate with publishers, teachers, and parents, the educational leaders in every district must understand and be knowledgeable about AIM. School leaders must know the specific types of accessible materials their students need and how these materials can be used. It is important to understand that digital, online versions of documents are not inherently accessible. When requesting accessible versions from publishers, the content should include all components of the print work (images, text, charts, graphs, and hyperlinks). The final file should have a screen resolution of 300 dots per inch and the same dimensions as the printed textbook. The file types that districts should consider requesting, in order from most to least flexible, are:

• Digital Accessible Information System (DAISY)/NIMAS with cascading style sheet.

• HyperText Markup Language (HTML).

• Portable Document Format (PDF) (unlocked, embedded fonts, single page).

• Rich Text Format (RTF)/Word document.

Collaboration: Providing accessible materials in a timely manner to all students who need them requires a close working relationship among a district's special education leaders, teachers, media specialists, and the curriculum coordinators. Curriculum coordinators typically have working relationships with textbook publishers, thus it is imperative that they ask for AIM whenever ordering materials and give preference to those publishers who make AIM available. Curriculum coordinators are often involved in initiatives such as Response to Intervention (RtI) and Universal Design for Learning and may share a high interest in pursuing the use of

accessible materials district wide in order to improve student performance in many core content classes. Assistive technology specialists play a vital role in determining the level of accessibility as well as in implementation. Districts are encouraged to include assistive technology specialists in their curriculum or textbook adoption committees. In addition, media specialists and technology integration personnel are often essential to the effective implementation of AIM.

AIM Coordination: Each ISD should have a person responsible for AIM coordination, and each local should have one or more persons who act as district AIM coordinators or digital rights managers. A close working relationship should be established between the ISD and local district AIM coordinators. Likewise, there should be a coordinated effort to collaborate with the state's NIMAS/AIM coordinator, as well as Recording for the Blind & Dyslexic, Bookshare.org, and other alternative media producers. The effective use of AIM in schools requires time and a coordinated effort. Collaboration between general and special education staff is an essential part of the equation. Districts should immediately begin discussion about AIM goal setting and staff responsibilities.

Summary

• NIMAS is the National Instructional Materials Accessibility Standard, a flexible file format that can be converted to Braille, Large Print, Digital/Electronic Text, and Audio.

• SEAs, ISDs, and LEAs must adopt NIMAS as indicated in the IDEA 2004.

• There is no inherent obligation on the part of publishers to upload NIMAS files to the National Instructional Materials Access Center (NIMAC) unless specific language is included in contracts/purchase agreements with publishers. Districts are required to include this language in all contracts.

• Not every student will be eligible to receive files from the NIMAC or accessible media producers, yet

districts are obligated to provide AIM to students with disabilities who cannot gain meaning from printed text.

- Schools should consider selection, acquisition, and use of AIM.

- Request and purchase AIM directly from publishers when possible.

- Collaboration is essential to effective implementation of AIM.

- Districts are encouraged to develop procedures for the delivery of AIM.

RESOURCES

Michigan Department of Education-Low Incidence Outreach (MDE-LIO)
www.cenmi.org/msdb-lio

Michigan's Integrated Technology Supports (MITS)
www.cenmi.org/mits

Accessible Instructional Materials Consortium (AIM)
http://aimconsortium.cast.org

National Instructional Materials Accessibility Standard (NIMAS) Technical Assistance
http://nimas.cast.org

National Instructional Materials Access Center (NIMAC)
http://nimac.us

Bookshare.org
www.bookshare.org

Recording for the Blind & Dyslexic
www.rfbd.org

American Printing House for the Blind
www.aph.org

American Foundation of the Blind
www.afb.org

National Library Service for the Blind and Physically Handicapped
www.loc.gov/nls

Individuals with Disabilities Education Act (IDEA)
www.ed.gov/policy/speced/guid/idea/idea2004.htm

The Association of American Publishers
www.publishers.org

The Association of Educational Publishers
www.aepweb.org

Michigan Education Web Sites

Michigan Department of Education
www.michigan.gov/mde

Michigan Department of Education (MDE)
Office of Special Education and Early Intervention Services (OSE-EIS)
www.michigan.gov/ose-eis

Center for Educational Networking (CEN)
www.cenmi.org