

# AIM for Social Studies: Simple Steps to Make Your Humanities Materials Accessible

February 6, 2014

## Speaker's Notes

### Presenters

Cynthia Curry, Maine AIM Consultant, and Shana Goodall, Orono High School Social Studies Teacher



### Objectives

Through the review of a social studies curriculum, participants will:

- Gain knowledge of skills and strategies required to:
  - o Determine the accessibility of a material for students with print disabilities.
  - o Create and select materials in accessible formats.
  - o Convert inaccessible materials to accessible versions.

### What is Accessible Instructional Material (AIM)?

According to the National Center on AIM, Accessible Instructional Materials (AIM) are materials designed or converted in a way that makes them usable across the widest range of student variability, regardless of format (print, digital, graphical, audio, and video).

For example, standard print materials can be converted to four recognized alternative (also known as “specialized”) formats: digital text, audio, large print, or braille.

[Follow this link to the National Center on AIM for more information about the specialized formats of AIM.](#)

### Student Variability

The term “student variability” is key to the definition of AIM. Variations exist across all learners, which can be observed through the ways they access, process, and communicate information. Some of this variability is due to differences in:

- Sensory abilities.
  - o Seeing, hearing.
- Physical abilities.
  - o Motor skills.
- Learning and cognitive abilities.
  - o Visual-spatial, visual-verbal, language and phonological processing.

## Formats Designed or Converted to be Usable

Like the students we serve in school, the five formats referenced in the definition of AIM are varied.

“Print” refers to materials such as standard print textbooks or other core curriculum materials; hard copy handouts or worksheets; booklets; or any resource that has been previously published in hard copy, printed, or photocopied and is not available in digital text format (e.g., saved on an electronic device or drive).

“Digital” refers to digital text documents (e.g., word processed files, PDF files, slideshow files, etc.), ebooks, websites, blogs, wikis, and creation tools that are increasingly used in classrooms (e.g., Voicethread, Prezi, Edmodo, etc.). This section applies to digital materials as they relate to desktop, laptop, tablet, and smartphone devices.

“Graphical” refers to images, photographs, charts, graphs, figures, maps, and cartoons. Materials in graphical format can be digital or print. The former appear in digital materials, such as digital text documents, websites, and ebooks. Print graphics refer to hard copy images in standard print books, manuals, and guides, as well as those that appear in stand-alone resources such as handouts, worksheets, and maps and atlases.

“Audio” refers to any material that is accessed through listening. These include books on tape or CD, digital talking books, podcasts, and any other audio format found online (streaming or on-demand). Additionally, teachers and students often create audio materials through their own voice and music recordings.

“Video” refers to materials that convey meaning through moving visual images. Audio is not a requirement. Sources of video include television, DVD, Internet (streaming or on-demand). Video is also increasingly embedded in multimedia books. Consistent with the increase in classroom technology innovation, teachers and students often create video materials with readily available cameras and media players.

Designing or converting these formats to be “usable across the widest range of student variability” is the subject of this webinar. For authenticity, the materials we’ll examine are related to Shana’s social studies curricula for two courses: AP Human Geography and World History.

## Print Format Materials

The standard print textbooks that Shana uses for her two courses serve as the examples of print format. These textbooks include:

- For AP Human Geography:

- o **THE CULTURAL LANDSCAPE: AN INTRODUCTION TO HUMAN GEOGRAPHY** (Prentice Hall, 9<sup>th</sup> Edition).
- o **HUMAN GEOGRAPHY IN ACTION** (Wiley, 4<sup>th</sup> Edition)
- For World History:
  - o **WORLD HISTORY: PEOPLE AND NATIONS** (Holt, Rinehart, and Winston)
  - o **OUR WORLD'S STORY: THE TALES, TRADITIONS AND TURNING POINTS** (Burnett, E.)

## Textbooks in Alternative Formats

Standard print textbooks and core curricular material such as those chosen for Shana's courses can be converted to four specialized formats:

- Digital text
- Audio
- Large print
- Braille

The conversion of copyrighted works, including textbooks and core curricular materials, is exclusively permitted for use by students with print disabilities.

## Exclusive Permission to Convert Copyrighted Works to Specialized Formats

An individual who receives a specialized format of a copyrighted work must qualify as having a "print disability," which is defined as "a condition related to blindness, visual impairment, specific learning disability, or other physical condition in which the student needs an alternate or specialized format in order to access and gain information from conventional printed materials."

It is important to note that this definition originated under copyright law. The 1996 Chafee Amendment to the U.S. Copyright Act establishes a limitation on the exclusive rights in copyrighted works. The amendment allows authorized entities to convert copyrighted works to specialized formats exclusively for use by individuals with print disabilities. Certain educators, such as special education teachers, qualify as "authorized entities."

[Follow this link to the Library of Congress website for information about the Copyright Law Amendment](#)

## Individuals with Disabilities Education Act (IDEA)

The 2004 reauthorization of the Individuals with Disabilities Education Act (IDEA '04) included a provision that relates the Chafee Amendment to access to curriculum materials for students with print disabilities. According to the provision, State Education Agencies (SEAs) and Local Education Agencies (LEAs) are to provide textbooks and related printed materials in specialized formats to students with print disabilities in a timely manner.

[Follow this link to the National Center on AIM for information about AIM in IDEA](#)

## Bookshare

Bookshare is known as an “Accessible Media Producer.” This organization is authorized to convert standard print copyrighted materials for exclusive use by individuals with print disabilities. Bookshare uses a high quality scanning system to convert print materials to digital text format. Books are downloaded directly from Bookshare and open in a number of software programs or on a selection of mobile apps. An online reader is also available for opening books on the web without download. Free memberships to Bookshare are available to qualifying students.

A search of Bookshare for the textbooks in Shana’s curricula showed that **THE CULTURAL LANDSCAPE: AN INTRODUCTION TO HUMAN GEOGRAPHY** is in its collection. The second book in her AP Human Geography course, **HUMAN GEOGRAPHY IN ACTION** (4<sup>th</sup> Edition), is not; the more recent Fifth Edition, however, is. A search of the books used in her World History course resulted in finding **WORLD HISTORY: PEOPLE AND NATIONS**. The second book, **OUR WORLD’S STORY: THE TALES, TRADITIONS AND TURNING POINTS**, is not in Bookshare’s collection. It is, however, available on Amazon for purchase. The Kindle app for iOS (iPad, iPod, iPhone) is accessible for students with blindness, making this a good option for acquiring the book for a student for whom the standard print version is unusable. And, of course, if a book in alternative format is purchased, it can be made available for any student without need to verify a qualifying print disability. (Note: The Amazon Kindle device is not currently accessible to students with blindness.)

[Follow this link to Bookshare.](#)

[Follow this link to learn about the accessibility of the Amazon iOS Kindle app](#)

## Learning Ally

Like Bookshare, Learning Ally is known as an “Accessible Media Producer.” Like Bookshare, students must qualify for membership. Learning Ally converts print material to human-narrated audio format. Books are downloaded directly to Learning Ally software or to one of Learning Ally’s mobile apps.

A search of Learning Ally for the textbooks in Shana’s curricula showed that **THE CULTURAL LANDSCAPE: AN INTRODUCTION TO HUMAN GEOGRAPHY** is in its collection. The second book in her AP Human Geography course, **HUMAN GEOGRAPHY IN ACTION** (4<sup>th</sup> Edition), is also in Learning Ally’s collection. A search of the books used in her World History course resulted in finding **WORLD HISTORY: PEOPLE AND NATIONS**. The second book, **OUR WORLD’S STORY: THE TALES, TRADITIONS AND TURNING POINTS**, is not in Learning Ally’s collection. A search of this book in commercial audiobook stores, such as Audible, led to no results. An option is to contact Learning Ally with a request to add the book to its collection.

[Follow this link to Learning Ally.](#)

[Follow this link to the Maine AIM Program's October 24, 2013, archived webinar, Bookshare and Learning Ally: What's New for Students with Print Disabilities](#)

[Follow this link to Bookshare for a full list of reading tools for computers, tablets, and mobile devices.](#)

[Follow this link to Learning Ally for a full list of reading tools for computers, tablets, and mobile devices.](#)

## Video

Shana uses the following videos in her curricula:

- *The Other Side of Outsourcing* (DVD, Discovery Education and segments available at its website).
- *God Grew Tired of Us: Cultural Differences* (online at National Geographic website).
- *One Earth, Many Scales* (online at Annenberg Learner).

Video presents barriers for students who are deaf and hard of hearing, as well as students with blindness and low vision. The audio portion of a video can be made accessible with closed captioning, which appears as lines of text, customarily in a horizontal section along the bottom of the screen. The captions present in text what is being conveyed through audio in the video. For example, dialog between characters or the lyrics to a song can appear in captions. Any sounds that are relevant to the content of the visual component of the video should be captioned

The visual portion can be made accessible with video description, which is delivered by a narrator who describes onscreen action that occurs when no sound is being delivered in the video.

In this webinar, we focus on closed captioning because it's a more developed accessibility solution. Video description is making progress and will soon be a more practical solution. The following link will lead you to more information about this emerging technology.

[Follow this link to the website of the Described and Captioned Media Program for information about an experimental tool for describing YouTube videos](#)

## Related Laws: Video Accessibility

Federal laws relate to providing accessible video to students with disabilities. Here are the most relevant:

[Follow this link to information about the Americans with Disabilities Act](#)

[Follow this link to the Telecommunications Act](#)

[Follow this link to Section 504 of the Rehabilitation Act](#)

[Follow this link to Section 508 of the Rehabilitation Act](#)

[Follow this link to the Assistive Technology Act](#)

[Follow this link to the 21st Century Communications and Video Accessibility Act](#)

## **Make Video a Multimedia Storybook**

By making video accessible to students with unique access needs and complying with federal law, you'll be rewarded by a multimedia storybook. Closed captioning reinforces literacy because students see, hear, and read the video content simultaneously. For early and emergent readers, this continuous connection between seeing the text and hearing it spoken aloud closely simulates storytelling. For more accomplished readers, adolescents, and teens, this still matters, particularly when the content of the video includes complex concepts and new vocabulary. So closed captioning can be considered a tool for differentiating a video into three parts: visual, audio, and text.

[Follow this link to an article titled, Captioned media: literacy support for diverse learners](#)

## **Discovery Channel Online**

According to the Discovery Channel Store, the DVD of the film, *The Other Side of Outsourcing*, has closed captions built in. Most DVDs from educational sources support closed captioning.

[Follow this link to CaptionMax for a guide on activating closed captions on DVD](#)

The online segments of the video are not captioned. An inquiry by email to Discovery was addressed but ultimately no definitive response about the availability of captions was provided. The video is illegally available on YouTube, which has a closed captioning option. The captioning, however, is not delivered through a caption file of the video; rather, Google's automatic speech recognition is used. This results in a crude version of closed captioning. Also, the video quality of the YouTube version is poor.

[Follow this link to segments of the Discovery Channel documentary, The Other Side of Outsourcing](#)

## **National Geographic**

The online documentary, *God Grew Tired of Us*, is not captioned. A note on the webpage states, "Transcript not currently available." In response to an inquiry to National Geographic by email, I was directed to the distributor of the film. Contact was made by email but no response was received as of the date of this webinar.

## **Annenberg Learner**

The Annenberg video, *One Earth, Many Scales*, is captioned. This is clearly indicated on the video with the universal symbol, CC.

## **Captioning Your Own Video**

Many media players support captions. Depending on length, captioning your own video can be a laborious and time-consuming process. The technical tools, however, have become user friendly. If your school has a student technology team, captioning videos can be an appropriate and meaningful project. The following links lead to information about common online media players that support captions.

[Follow this link to a YouTube video with instructions for captioning YouTube video](#)

[Follow this link to the website of Vimeo for information about adding captions](#)

[Follow this link to Amara's support center for instructions on how to add captions to uploaded video](#)

Fee-based captioning and transcribing services are also available. Here are two reputable companies.

[Follow this link to CaptionSync](#)

[Follow this link to 3Play Media](#)

## **Websites**

Shana provided the following websites as typical of her curricula:

- World History.
  - o Wikibooks: The World History Project.
  - o Wikibooks: California Open Source Textbook Project/World History Project.
- AP Human Geography.
  - o The New York Times Magazine: Everyone Eats (Oct/2012).

Websites can pose unique accessibility challenges to users who are blind or have low vision and use specialized software known as a “screen reader.” A screen reader reads aloud all elements on a screen, such as text, buttons, links, images, dialog boxes, filenames, application titles, etc. A screen reader user controls the program through keyboard commands. In order to be successful with navigating a website, the web author needs to know how to make the site accessible to screen reader technology. And, while web accessibility is mandated by federal law to prevent discrimination, websites that comply with accessibility standards are typically intuitive, organized, and readable for all users.

## **Related Laws: Web Accessibility**

Federal laws relate to providing accessible video to students with disabilities. Here

are the most relevant:

[Follow this link to information about the Americans with Disabilities Act](#)

[Follow this link to the Telecommunications Act](#)

[Follow this link to Section 504 of the Rehabilitation Act](#)

[Follow this link to Section 508 of the Rehabilitation Act](#)

Web accessibility is the most technical topic of this webinar. The following link will take you to a basic overview:

[Follow this link to the website of Johns Hopkins University for a resource on understanding basic web accessibility](#)

### **Wikibook: The World History Project**

The layout and organization of Wikibooks are typically basic and consistent. I tested the *The World History Project* with VoiceOver, Mac OS X's built-in screen reader. Two issues that are good examples of common accessibility problems appeared. One is that the image on the page was not fully described to the screen reader. A user who is blind cannot see an image, therefore the screen reader looks for an alternative text description that is created by the web author. The image on this page was described as "World Map 1689.JPG." Although this is a basic title and better than the absence of any description at all, a better solution would be to use the description of the image as supplied at the source page, which is "An old world map produced in Amsterdam in 1689." The purpose of alternative text is to provide the user with equivalent information that a sighted user has. To that end, an alternative text description can be useful to sighted users who are unfamiliar with an image or who need additional information to understand its purpose.

The second issue on this page was the word "here" used for a hyperlink. A strategy used by screen readers to efficiently navigate a web page is to gather all links in a single list, which is read aloud. When a link is titled "here," the screen reader user does not have the necessary information to know its destination. In this example, a better title for the link would be "Follow this link for information about the staff members of The World History Project."

### **New York Times**

The New York Times article, *Everyone Eats There*, has a more complex layout and organization than Wikibooks pages. Similar to the image in Wikibooks, the photo on this page lacked a meaningful description. The caption on the photo provided information but alternative text was not added to the image itself.

This page offers the opportunity to demonstrate a strategy to minimize extraneous and distracting elements that are customary to commercial websites. Advertisements, hyperlinks to other articles, pop-ups, and other elements can be

distracting to all users, but especially disorienting for screen reader users and individuals who have difficulty with attention and focus.

## **Readability**

A tool demonstrated during the webinar is known as Readability, which converts a web page that contains extraneous elements, leaving just the main content. The Readability page can be exported from the web to a PDF file, allowing for annotations and markups.

[Follow this link to the website of Readability](#)

Here are some alternatives to Readability:

[Follow this link for instructions on how to use Safari Reader on Mac OS](#)

[Follow this link for instructions on how to use Safari Reader on iOS](#)

[Follow this link for instructions on how to use Pocket \(multiple platforms\)](#)

## **Digital Documents**

Shana shared two digital documents that are representative of her curriculum. One is a product guide for a project on the Islamic Empire. The other is a guide for students to complete while or after watching the video, *One Earth, Many Scales*. Both were created with Microsoft Word.

Similar to websites, accessibility of text documents is especially important to users of screen readers. And, like accessible websites, a digital text document that complies with basic accessibility techniques will be more organized and usable for everyone.

## **Related Laws: Digital Text Documents**

Federal laws relate to providing accessible digital text documents to students with disabilities. Here are the most relevant:

[Follow this link to information about the Americans with Disabilities Act](#)

[Follow this link to Section 504 of the Rehabilitation Act](#)

[Follow this link to information about the Americans with Disabilities Act](#)

[Follow this link to information about the Individuals with Disabilities Education Act](#)

## **Digital Document Accessibility**

After discussing the physical and technical features of Shana's documents we focused on a list of the "do"s and "don't"s of creating accessible digital text documents. These included:

- Apply the built-in styles of your program (Title, Subtitle, Heading 1,

- Heading 2, Normal, List, etc.).
- Choose sans serif fonts (Arial, Helvetica, Verdana, etc.).
- Use high contrast (white on black or black on white).
- Add alternative text descriptions to images.
- Use titles for hyperlinks vs. URLs.
- Use your program's Table and Column Tools.
- Avoid text boxes.

Shana was presented with makeover examples of her original text documents.

In honor of Digital Learning Day 2014 (the day before the webinar), the Maine CITE program edited and revised its resource, Making Educational Documents Accessible to All.

[Follow this link to the website of Maine CITE's resource, Making Educational Documents Accessible to All](#)

## **iPad Relevance**

Shana's students use MacBook Airs. Many students in Maine, however, have been provided with iPads or other mobile devices. Here are a few apps and features of iPads that are relevant to the topics we explored in the webinar:

Bookshare and Learning Ally: Both of these services support mobile apps.

[Follow this link to Bookshare's webpage on Mobile Phones and Tablets](#)

[Follow this link to Learning Ally for book playback options](#)

Closed captioning can be enabled on iPad.

[Follow this link to Apple's website to learn how to enable and customize closed captioning on iOS](#)

Like Mac OS X, a built-in screen reader comes with iOS devices.

[Follow this link to Apple's website to learn about VoiceOver on iOS.](#)

Speak Selection on iOS reads aloud digital text.

[Follow this link to iOS Guides for instructions on how to use Speak Selection](#)

Google Text-to-Speech powers applications on Android devices to read onscreen text aloud.

[Follow this link to Google Play for information about Google Text-to-Speech](#)

Android devices support closed captioning.

[Follow this link to Flixter's help center for instructions on how to use closed captioning on Android](#)

Accessible iBooks can be created for iOS.

[Follow this link to Apple's website for information on creating accessible iBooks using iBooks Author](#)

Worksheets can be opened on iPad through apps that allow students to complete and mark them up via the touchscreen.

[Follow this link to Apple's iTunes website for information about Pages app](#)

[Follow this link to the website of Ginger Labs for information about Notability](#)

[Follow this link to the website of Kdan Mobile to learn about PDF Connoisseur](#)

## **Key Points of the Presentation**

The webinar closed with a summary of the key points of the presentation:

- Accessible Instructional Materials, or AIM, are educational materials that are usable across a wide range of student variability.
- Materials in print, digital, graphical, audio, and video formats can be designed or converted to be accessible.
- AIM is mandated through federal legislation.
- Accessibility makes a curriculum better for all learners.

## **Resource**

[Follow this link to the Maine AIM Program for the archived materials of this webinar presentation.](#)

## **Contact**

[info@maine-aim.org](mailto:info@maine-aim.org)