Welcome to AEM Part Four: Introduction to Bookshare. We will review the services of the Authorized Media Producer (AMP) Bookshare.
First, let's review the agenda for today's presentation. The first section will be introductory content. In the second section we will get stuff done! Then, we will conclude with a brief discussion.
Bookshare Introduction

Bookshare

• Authorized Media Producer (AMP) established in 2006.
• An online repository for accessible formats.
• Federally-funded with grants from the Office of Special Education Programs (OSEP) in 2007 and renewed 2012.
  – The funding provides free membership for qualified U.S. students and schools.

Mission:
• “Benetech [Bookshare] is a nonprofit technology company [that] pursues projects with a strong social rather than financial rate of return on investment.”

https://www.bookshare.org//aboutUs/2012/07/benetechWinsAward

Wyoming Institute for Disabilities

Bookshare is an Authorized Media Producer (AMP) established in 2006. Bookshare is an online repository for accessible textbooks.

Thanks to a grant from the Office of Special Education Programs (OSEP), in 2007 and again in 2012, Bookshare will continue to provide free memberships to any qualified U.S. student or school.

Bookshare’s mission is worth repeating: Benetech, Bookshare’s parent company, is a nonprofit technology company that pursues projects with a strong social rather than financial rate of return on investment (ROI). Bookshare has become a leader in the distribution of accessible textbooks to students with disabilities.
Bookshare maintains an online repository of over 167,000 accessible titles (and growing) and serves over 200,000 members. Bookshare plans to double the number of student memberships from 200,000 to 400,000 by 2017. Bookshare also plans to make available over 200,000 educational titles by 2017.

Meeting the qualifications of a print disability is essential for Bookshare membership and IEP teams seeking Accessible Instructional Material. Later in the presentation, we will review what qualifies as a print disability and who is authorized to provide certification for a print disability.
Available Formats from Bookshare

1. Digital Talking Books (DTBs)
   - DAISY format (text, audio, and images)
2. Audio-only formats
   - DAISY audio-only
   - MP3 audio format
3. Digital Braille (BRF file)
   - Embossed Braille
   - Refreshable Braille displays
4. NIMAC-sourced material for K12 school administrators

Bookshare provides DAISY digital talking books (DTBs), Audio-only formats, Braille Ready Format (BRF) files, and NIMAC-sourced material for K12 AEM coordinators and school administrators.

Bookshare has an optional DAISY format that includes textbook images. This is a great option for a student needing a Digital Talking Book for a textbook with many images that are required to understand the subject.
The membership structure for Bookshare includes the individual membership and the organizational membership. The individual membership for students is a great option: it is free, students can access their account from anywhere in the world, and they can download any book they desire, regardless if it is used in the classroom.

The organizational membership is a must have tool for any school. The membership is free and a designated person (e.g. the Special Education Teacher) will manage the account and download content for qualifying students in the school. The organizational membership can provide the initial AEM to a student on a newly formed IEP. If possible, the long term goal should be to transition the student and/or family to their own individual membership due to the benefits of an individual membership. Currently, application development for phone, mobile, tablet, iOS, and PC devices are making Bookshare content freely and readily available. This can be a huge benefit for a student. However, use of these apps requires an individual membership.
To Begin a discussion of Bookshare, and how a student qualifies for membership, it is important to discuss the Chaffee amendment to the Copyright Law.
Chaffee Amendment

- Chaffee amendment provides an exclusion to the Copyright law allowing for authorized entities to reproduce and distribute copyrighted material in a specialized format to “blind or other persons with a print disability.”
- A “blind or other persons with a print disability” is defined in the An Act to Provide Books for the Adult Blind of 1931.

“Blind or other persons with a print disability” includes:
1. Blind or low vision.
2. A physical disability that inhibits the reading of the printed book.
3. A severe reading disability that is based on an organic dysfunction.

http://www.loc.gov/nls/sec701.html

Wyoming Institute for Disabilities

Bookshare operates in strict accordance with the Chaffee amendment to the Copyright Law. The Chaffee amendment of 1996 Allows authorized entities to distribute copyrighted materials in a specialized format to individuals with a qualified print disability, without violating the copyright law. The Chaffee amendment does not consider a learning disability a qualified print disability. In module five we will review Learning Ally and how a learning disability does qualify for a Learning Ally membership.

A qualified print disability is defined in the An Act to Provide Books for the Adult Blind passed in 1931. This act established the Library of Congress’ National Library Service for the Blind and Physically Handicapped (or NLS) and has been amended, most recently in 1966, to expand the definition of a “print disability” and “competent authority” to certify a print disability. These definitions are used to establish a qualified print disability under the Chaffee amendment.
This slide is just to highlight that a “competent authority” is defined by An Act to Provide Books for the Adult Blind of 1931, as amended. The list of competent authorities has been updated since 1931, most recently in 1981.

Do not worry about all of the professions listed as a competent authorities, here. Bookshare has a tailored list of “appropriate authorities” that can certify a print disability. It is Bookshare’s requirements that we will review in detail.
Let’s review the requirements for a Bookshare membership. The definition of a qualified print disability is strictly defined, as we discussed, but Bookshare has a slightly expanded scope of professions that can certify a print disability.
We are familiar with the three broad categories that define a qualified print disability. I thought I would give an example of a student who would, and would not, qualify.

Bookshare Qualifications

Disability:
1. Blindness and Visual Impairments
2. Physical Disability
3. Perceptual Disability with a physical basis

Examples:
• A student with a learning disability would not qualify.
• A student with a learning disability and a qualified reading disability, due to a physical limitation, would qualify.
I have highlighted the appropriate experts that are readily available in the K12 school system and other memberships that automatically qualify a student for Bookshare membership. Certification of a print disability from a school administrator can result in quicker delivery of AEM to the student.
Once again, I have highlighted the appropriate experts that are readily available in the K12 school system. Reading disabilities resulting from a physical disability can be diagnosed by school administrators that have experience working with the student, such as members of the IEP team.
Finally, certification of a perceptual disability can come from a variety of appropriate experts.

It is important to note that the text of this slide is verbatim from Bookshare’s website. You will notice that Bookshare uses different terminology than that used in the Chaffee amendment terminology to represent the third category of qualifying print disability. The Chaffee amendment uses the following terminology to represent third category of qualifying print disability: a severe reading disability that is based on an organic dysfunction. Bookshare has added a severe learning disability to this category of qualified print disabilities.

Bookshare also has a wider scope of appropriate experts that can certify a perceptual disability.
Let’s review how you register for a Bookshare membership. It is a fairly easy process.
To begin the registration process, download the appropriate two forms from Bookshare. You can download the forms at the link provided in the slide. The agreement form will need to be filled-in by the individual seeking membership. The proof of disability form will need to be completed by the appropriate expert identified in the preceding discussion. Once the forms are complete, you can submit to Bookshare by mail or fax.
Once you have registered for Bookshare, you will be on your way to downloading digital talking books, maybe for the first time. Let’s discuss what Digital Talking Books (DTBs) are.
What makes a DTB so good? Unlike an analog recording, digital media can be indexed, searched, and synchronized with other digital media. Synchronization is what sets DTBs apart from other digital mediums. The magic takes place via the Synchronization Media Interface Language (SMIL). The playback of DTBs synchronizes the digital audio with the digital text that appears on the display. The digital audio can be navigated by chapter, section, subsections, and page and the corresponding digital text and images will appear on the display.
There are two leading accessible DTB technologies. The group responsible for maintaining the DAISY standard, The DAISY Consortium, works closely with the maintenance organization responsible for the EPUB standard.

DAISY is considered a specialized format for use by people with disabilities. The DAISY standard has also revolutionized the accessibility of the printed book. We will focus our discussion on the DAISY standard as this is the format the Authorized Media Producers of AEM distribute, including Bookshare.

EPUB shares many of the accessibility features that DAISY has pioneered. EPUB is an open-source standard and has a lot of support in the e-book market, such as the Barnes & Noble Nook.

<table>
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<tr>
<th>DAISY</th>
<th>EPUB</th>
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<tbody>
<tr>
<td>Open-source standard</td>
<td>Open-source standard</td>
</tr>
<tr>
<td>Designed for accessibility</td>
<td>Designed for publishing industry</td>
</tr>
<tr>
<td>International (ANSI/NISO) standard</td>
<td>Wider support in e-book market</td>
</tr>
<tr>
<td>Specific to accessible product market</td>
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Wyoming Institute for Disabilities
The success of the DAISY standard is due to its use of Web technologies, such as XML, to deliver content to users. XML, based on the same technology as HTML, is a technology used to encode data in a hierarchical structure. You can store almost all data types in this format, such as that used in databases, catalogs, and phone books. With XML, textual information can be nested into elements, which is ideal for representing the structure of a textbook. For example, a chapter 1 element will contain all sections of chapter 1. Each section element will contain all subsections for the subsection. This nested structure gives navigability to the DAISY DTB. On request, a DAISY player can easily locate content in chapter 1, subsection iv, paragraph 3 on page 43. With a click of a button on the DAISY player, a user can easily advance to the next subsection, subsection v, without the need for a search.

The magic of the DAISY format is its ability to synchronize the textual information in the XML document with the audio files during playback. As the audio files are being read the corresponding textual information is displayed—providing a multimodal learning interaction with the instructional material.

Finally, The DAISY standard is an international ANSI/NISO standard.
<table>
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<tr>
<th>Audio and full text</th>
<th>Text and no audio</th>
<th>Audio-only</th>
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<tr>
<td>• Audio and text synchronized</td>
<td>• The audio will be rendered with a synthetic computer voice</td>
<td>• No textual rendering</td>
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There are three DAISY DTB configurations. A DAISY file can be composed of audio-only files, text-only files, or text and audio files. All three configurations provide the same multimodal experience, except the audio-only configuration. This configuration does not include an XML file for textual information storage. Thus, there is no synchronized display of text during playback. The audio-only configuration is mainly used to protect copyrighted material. With an XML file it is easy to reproduce and redistribute copyrighted material. Learning Ally is one of the very few entities to utilize an audio-only DAISY configuration for distribution. Bookshare provides an audio-only DAISY configuration for compatibility with NLS players, which cannot read XML files. However, Bookshare widely distributes audio and full text DAISY.
“EPUB defines a means of representing, packaging and encoding structured and semantically enhanced Web content for distribution in a single-file format.”

http://idpf.org/epub

- **EPUB Version 2** – Based on the DAISY standard. (2007)
- **EPUB Version 3** – Based on the HTML5 standard. Supports new technologies, such as MathML. Synchronization of audio and text. (2011)

EPUB is maintained by the International Digital Publishing Forum (IDPF) and is a delivery and interchange standard.

EPUB version 2 was largely based on the DAISY standard and used some of the same technologies. The big advantage of using DAISY and XML technology was that content could be stored in a semantic structure file format. Now, with the advent of HTML 5 (and its inherent semantic structure) content can be stored in the HTML 5 format. For example, HTML 5 allows content to be structured based on its semantic value by using the following designations: article, aside, section, figure, figcaption, address, heading, and navigation—to name a few. HTML 5 can also store mathematical equations in the MathML format.
EPUB is a popular open-source (non-proprietary) format for e-book readers. The only holdout is Amazon Kindle devices.

It is important to be aware of the EPUB standard as it might be an option for a student with an e-book reader. A student can download EPUB-formatted books from e-book vendors, such as kobobooks.com, and EPUB 3 has the same accessibility features as DAISY DTBs.

Also, starting in 2013 Bookshare will adopt the EPUB 3 standard and make available a free, web-based EPUB 3 reader system that can be used on any computer with internet access to read Bookshare books. The EPUB reader system is currently called, Readium.
Introduction to Bookshare’s website

BOOKSHARE WEB INTERFACE

Wyoming Institute for Disabilities

Bookshare online. Let's go to www.bookshare.org
After you log in, you are brought to the account member’s home page. From the home page you have many options, such as account management, textbook search, and download history. Account management features can be accessed from the member’s Task Bar, located in the top-left corner. The next slide will review the Task Bar.
Here is a blown-up image of the Task Bar from the member’s home page. There are seven links from the Task Bar that will help you manage and update your account. You will frequent the “My History” link to view all downloads you have requested and the “My Account” link to update your account. School administrators will also frequent the “My Organization” link to update student roster information.

After you get your account setup, the process of searching and downloading textbooks from Bookshare is fairly easy. Let’s give it a try!
Okay, let’s begin a textbook search.
If you have an internet connection, then you can follow-along by going to Bookshare’s website. You can click on the image in the PowerPoint slide to open Bookshare’s home page. You can also open your browser and go to w-w-w-b-o-o-k-s-h-a-r-e-o-r-g. Begin a textbook search by typing the title, author, keyword, or ISBN into the search field, highlighted here by the orange arrow. We will search for a textbook titled *Interactive Science*. Click the “Search” button.
The search results page will present the title, author, and copyright of items that match your search criteria. You can filter the search results by “Sort Order” and “Authors.” The filter selectors are located above the search results table and indicated in the above picture with the blue circle. There will be a “Download” button to the right side of the search result item. Once you have located the correct item, select the “Download” button to continue, as indicated in the picture above.
If you have an Organizational account, you will need to identify the student for whom the book is being downloaded. The “Select Members” page will auto-populate a table with members you have verified as eligible for Bookshare materials. Select a student by clicking on the checkbox next to the student’s name, as indicated in the screenshot. You can select as many members as needed for the particular book download.

Eligible students can be added to your Bookshare roster by going to the “My Organization” link on the Task Bar.
You can choose the download format or set the download format preference on the “Select Members” page. Open the drop-down menu on the right-side of the member’s entry in the members table. In this example, I have decided to “set preferences” for this member. The download preferences set will be the default download format for all future downloads performed for this member, until the download preference is reset.
You have multiple choices for download preferences. When you select the download format as “DAISY with Images” you will need to set the accompanying settings for the format. For example, you can set the image quality to High or Low resolution.

If you choose the Braille Ready Format (BRF) for the Default Download Format, then you will need to select the Braille Grade (grade 1 or 2) and the type of Braille Ready Format, such as refreshable display 18-to-80 cells wide, or embossed Braille.

If you choose Audio for the Default Download Format, then you will need to select the type of audio format, either DAISY Audio or MP3.

When you have finished setting the download preferences of the student, select the “OK” button at the bottom-left. You are now ready to download the book. Scroll to the bottom of the page and click the “download” button.
After selecting the “download” button on the “Select Members” page you will be asked to confirm the book download request. Go-ahead and select the “Download” button, again.
When you confirm the download on the previous page, you will then be taken to the “My History” page. Your book will be listed atop the recent history listing. Bookshare may take a couple of minutes to process your request. When the book is ready for download, the “Status” of your book will be set to “Available.” Click on the “Available” link in the “status” column to save the book to your computer.
If you are using Microsoft's Internet Explorer 9 internet browser you will receive a notification bar asking you to select an option. Choose “Save” or select the drop down menu and select “Save As” to designate a download location other than your Download folder.

If you are using Internet Explorer 9, you will be presented with a Notification Bar at the bottom of the browser display. Select “Save” or click the down-arrow to open the drop-down display and select “Save-As” and then choose a location to save your electronic book files.
If you did not find your book in the Bookshare library, then you can request Bookshare purchase and convert the book for you at no charge. Unless you are planning months in advance to provide AEM to a student, this option will not be viable. However, this option can be successful for future students who will be enrolled in your class and in need of AEM. If you plan to use the same textbook for the next couple of years, provided a new version of the textbook is not released during this time, go-ahead and request Bookshare convert the textbook.
If you do not find the book you are looking for, then you can request Bookshare purchase and scan the book for you. Just go to the “Contact Us” tab on the navigation menu and select “Requesting a School Book” from “My Question is about” drop-down menu. In the comment field indicate the ISBN number, title, and author of the book you want to convert. The request will take about 2 months to process and Bookshare will email you when the book is ready for download.
We are not done, yet. We need to deliver the content to the student in a student-ready format.
For demonstration purposes, all of the available formats from Bookshare have been downloaded except MP3 audio and the proprietary BKS2 format for the Victor Reader Soft.

You will notice that each download is a ZIP file with a “.zip” file name. The file name includes the title of the electronic book and the student’s name. The student’s name is also embedded in other portions of the download so that Bookshare can track the use of the file(s). The name of the downloaded file also includes a description of the requested format preference, such as DAISY with images, DAISY text-only, DAISY audio, or BRF.

It is important to note that if a downloaded DTB is found to have been distributed to the public, Bookshare can identify the originator of the download from Bookshare and be held accountable.
If the student is comfortable handling a ZIP file, then go-ahead and deliver the ZIP file to your student. The student will need to unzip the file and sync to a DAISY player. If you would like to unzip and sync the DTB to the student’s device, then go-ahead and unzip the downloaded ZIP file. Right-click on the file that you want to extract and select “Extract All...” from the context menu. A dialog box will be displayed. Keep the default settings in the dialog box and the file will be extracted to a new folder in the same location as the ZIP file.
This slide shows the contents of the unzipped DAISY folder. There is more in a DAISY folder than you need to know. Just keep all the content in the DAISY folder and copy or sync the folder to your portable DAISY player. You can also open your DAISY player software application and select “open” from the file menu and navigate to the this DAISY folder and upload the DAISY DTB. Your DAISY player software will know what to do with all the DAISY content. For management purposes it would be best to keep all of the DAISY DTBs in a folder on your computer that you designate as the DAISY DTB repository. Your DAISY software application can be set to automatically upload any DAISY content that is placed in the designated DAISY repository folder.

For those who want to know more, the XML Document (highlighted in the screenshot) contains all of the textual information for the DTB. The SMIL files synchronize the audio with the text and images during playback. You will notice in this DAISY folder that there are no MP3 audio files. This is the type of DAISY called text-only DAISY. The DAISY player application will upload the xml file containing the text and use a synthetic computer voice to create the audio output during playback.

Also, you can open the XML document by double-clicking and the DTB will open in your default browser. This will appear similar to an online version of the textbook, complete with pictures and page numbers. This is a good option for students who would like to bypass a DAISY player and use a text-to-speech application available on their computer.
student can zoom-in and re-flow the text using an internet browser application to view the DAISY content.
Read a DTB in an Internet Browser

Here is an example of a DTB uploaded with an internet browser, such as Microsoft’s Internet Explorer. The text is formatted visually and semantically. A student can navigate the digital text with a text-to-speech application, because the text is appropriately marked-up, meaning the section heading “The Rocket Boys Move NIH” is listed as a section heading in the code. This gives semantic meaning to the digital text and a text-to-speech application can navigate, accordingly. It is also possible to navigate by page number.
A BRF file format is a text (txt) file with ASCII characters to represent the Braille output by a Braille translator.

A BRF file can be:
1. Uploaded to a refreshable Braille display.
2. Embossed on Braille paper by using a Braille translator software program and a Braille embosser.

You can upload a BRF file to a refreshable Braille display or emboss on Braille paper using a Braille translator software program and a Braille embosser.
How to listen to a DAISY DTB
Her is a list of DAISY playback options, they are:

1) Free DAISY reader software from Bookshare

   Note: Can only play DAISY DTBs from Bookshare
   1. Victor Reader Soft Bookshare Edition from Humanware
   2. Read:Outloud Bookshare Edition from Don Johnston

2) Free DAISY reader software available to anyone

   1. AMIS from the DAISY Consortium (http://www.daisy.org/amis/download)

3) Any DAISY-compatible hardware players

   - Humanware DAISY players (http://www.humanware.com)
   - DAISY players from online vendor Enablemart (http://www.enablemart.com)

4) Wyoming Institute for Disabilities (WIND) AIM clearinghouse

   - Wyoming AIM clearinghouse offers the ReadHear (Mac or PC) DAISY reader software for $299 to all school districts in Wyoming.
More DAISY playback options.

Bookshare offers the audio-only format for playback on a variety of other free technologies:

1. DAISY Audio is compatible with NLS players.
2. MP3 is useful for students who do not have a computer at home.

We can download the DAISY audio-only format by setting the Download Preferences during download from Bookshare.

We can select the DAISY audio-only format by setting the Download Preferences for the student when downloading from Bookshare. The next slide will show where to select the DAISY audio-only format.
In the Download Preferences settings dialog box, select “DAISY Audio” for the Default Download Format.

When you select “Audio” (choice 3) you will need to specify the audio type: either DAISY Audio or MP3

The MP3 format can be played on almost any digital device capable of audio playback. Bookshare made this option available so students could listen to their DTB from almost any device—without paying a lot of money.
Conclusion
Conclusions

Every school should have a Bookshare organizational membership!

Why?

• Free.
• Quick delivery of AEM to the student.
• Access to over 162,662 titles.
• Easy account management.

Every school should have a Bookshare organizational membership!

Why? Because it is free, offers quick delivery of AEM to the student, access to over 162,662 titles, and it is easy to manage.
Thank you. The next AEM training topic will be a review of the services offered by the Authorized Media Producer (AMP) Learning Ally. See you then, take care.