Webinar: Examining the Accessible Mobile Reading Revolution

Date: March 24, 2021

Full details about this webinar including links to related resources can be found on our website:

<https://daisy.org/news-events/articles/accessible-mobile-reading-revolution-w>

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>> Richard Orme:  
Hello everyone, and a very warm welcome to you. My name is Richard Orme, and I am your host for today’s webinar “Examining the Accessible Mobile Reading Revolution”.  
OK, let’s get started!  
Our team at DAISY are in regular discussions with library   
services, college, and university colleagues, who tell us about   
user trends and expectations. Of course mobile has been a factor   
for many years. Many DAISY member organisations have launched apps, and some students have used their mobile phones and tablets for reading eBooks.   
But what we have been hearing is that the events of 2020 have   
accelerated the shift to mobile for many end users. That rate of   
change seems like it may continue through 2021, and when all of this is over, it will be interesting to see if changes in behaviors for reading and learning, will ever return to how things used to be.  
Once again we have a super panel for you today, as we explore the   
accessible mobile reading revolution. How do things look   
from a college perspective, are the needs and expectations of   
students with disabilities changing? From the digital textbook platforms, what are the numbers telling us, and how are you responding? And for people with reading disabilities, does   
the reading experience on a mobile device really measure up   
to a proper computer?  
There’s a lot there for our speakers to get their teeth   
into, so let’s turn it over to them, and I’ll our panel to   
introduce themselves.

>> Erin Lucas: Thank you. I'm Erin Lucas. I'm the senior director of digital accessibility at RedShelf.

>> Darrin Evans: I work in North Carolina and the virtual learning community there.

>> Stacy Ray: I'm Stacy Ray and I'm the product manager for bookshelf for VitalSource.

>> Robin Spinks: Hello, I'm Robin Spinks and I'm an RNIB in the UK.

>> Richard Orme: We are going to hear from a college from Darrin and is learning going mobile. We will hear from Erin and Stacy on that. Then we will hear on mobile does it measure up and then as a group we will discuss accessible mobile reading.

>> Darrin Evans: We did a survey with our students and asked them how they access course materials or learning management system. It was a pretty extensive survey of about 12,000 students or so. They interact with content 12% are on desktops. 46% were laptops and 42% are totally mobile. We have some students that are mobile. We have a blind student who his preference is voice over on his iPhone. So it's happening and we are noticing these numbers increase more and more. So what we need at colleges we need mobile responsive content that's accessible and useable for our students. The more specific need for us is for mobile responsive accessible text books and class materials that we can put out there and these students can interact with on their phones and tablets because that's what they are doing now.

>> Richard Orme: Darrin, that may be the reality, but can students really be proper students if they are using an iPhone or android tablet? Here's a poll we have for our webinar attendees. We would love to hear your views on this. The statement is learns need a laptop to be a serious student? We will learn a lot during the course of today's webinar, but we would love to hear as to whether or not learns need a laptop to be a serious student. Let's hear from the perspective of the eBook platforms to learn about how learning is already mobile from Stacy.

>> Stacy Ray: One of the webinar objectives is to answer is learning going mobile. You saw Darrin's impressive numbers he presented from his university. Learning is already mobile. What we are going to see is an increase in the next 3‑5 years as it continues to grow. At VitalSource we have a long history of providing mobile solutions using our bookshelf reading system. We have been providing or delivering our OIS and android apps native and accessibly for over 9 years. We have 2 million users accessing our content. So it's already here and has been for a while. There's many reasons learns choose mobile apps. Portability. They need to work offline and the convenience that a mobile app provides. Some find it hard to find that phones and tablets are an effective way to study but these students grew up with mobile apps and phones in their hands and they are accustom to spending a lot of time on their devices whether that's reading, banking or just socializing. 15%‑20% of our page views are on a mobile application. That said, not all experiences translate equally to a smaller device screen. Some features like read aloud become important as users take advantage of that portable. Features like flash cards or notes or anything that requires extensive typing are reserved for computers and laptops. Anecdotally we hear that our users choose depending on if they are at a desk. If studying STEM they may want a focused experience. Often they use their phones as a compliment. So we do have a segment that relies solely on phones and tablets, but I think it's a little bit of a smaller audience. Think 15‑8‑10 will use phones and tablets for their sole learning experience. So can mobile apps provide the same level of accessibility that learns expect from desktop applications? I think the answer is yes. From what we have seen, it definitely can using and taking advantage of those accessibility features that are available through the operating system. But it does take commitment, but that commitment is no different than what we see on the browser's web platforms. On the engineering side something important is when doing our basic engineering making sure that buttons are labeled, headings are identified properly, focus making sure the focus moves through the mobile platform in a way that makes sense to the user. So if you have a user using an Assistive Technology, the focus needs to move around the screen in a way that they can ideally digest where they are at in the application. On the content side, EPUBs provide a better reading experience since the text reflows adjust to the screen side. PDF can be difficult. They have to zoom the page. They have to pan side to side because a small portion will fit on the screen. So keep these in mind.

One interesting stat that I had is that our mobile usage has been impacted by this learning COVID experience. So while our number of users have increased from 2019‑2020 we saw an increase, but our actual page views dropped by 3%. I know that seems counter intuitive but as people have transitioned from a learn at home situation where they are on the move less, they may be in lock down, they really are not requiring that portability. They are using more of the traditional laptop experience to do their studying. So on the next slide we will look at some of the top bookshelf features that our users use.

The top 5 features over the last 6 months have been table of content, highlight, search, read aloud and display controls which allow our users to make the visual adjustments including changing the background color, font, line spacing and margins. We consider [inaudible] to be navigational elements. If a user requires a screen reader, you want to make sure as the user completes a search that they are actually that focus is moving around the screen in appropriate way. Read aloud and display controls are important for some eye conditions and learning disabilities.

The same top 5 ranking on our desktop and browser applications. Maybe a little bit of a different order but the features that are being used on mobile are the same features that are being use D on browser-based programs. So what's next for us? Dynamic text and dark mode. Those aid the Assistive Technology. Or aid the assistive community with dynamic text. Relying on the operating system accessibility settings to increase the text size within the app automatically. So if you have it set for all your apps it will automatically size the text. Dark mode, getting back to the point of making it easier for individuals with low vision or certain readable disabilities and eye conditions to read the text on their screen. Internally within the book‑shelf team we talk about meeting learns where they are. So bring them into the center of our learning experience. It's important to move that accessibility conversation to the left of the design or the build phase. It's not something that we can wait until we are actually building the app to address. We do that by starting with good design. One that takes accessibility into account from the beginning. Our goal is not to take an interface that works on a desk top and squeeze it on to a tiny screen because then you end up with a mess. Sometimes you have to make some very conscious decisions about whether a feature is implemented on a mobile app or whether it lives on the main user face or whether it has to live behind a specific menu. I'm going to contradict myself a little bit and say consistency is also important. So if a user is uses a screen reader on a desk top, they will have a certain ‑‑ almost a memorization of what ‑‑ how that interface navigates. It's important to remember that understanding is going to apply to a mobile app as well. So as much as possible we want to keep that focus, so it moves in the same direction. We also spend a lot of time designing and conducting user testing on our mobile devices. Whenever we build a feature or update, we recruit and test with an audience of users that are primary mobile users. It's all about making sure the experience is intuitive and any changes we have made to that screen design to accommodation for the lack of real estate makes sense to them.

We haven't gotten to the point yet where we are able to do user testing with bookshelf users that do utilize Assistive Technology like screen readers, but we do test our prototypes in advance with our accessibility testing consultants. We have actually made some changes to our design based upon the feedback from our testing consultants. For example, we had probably about 6 months ago a design for a feature that included an accordion drop down. Our testing consultants came back to us and said this is not going to be easy for a person on a screen reader to actually navigate. These are notoriously bad. They recommended we create or utilize a tree structure. Visually it got us where we wanted to be with the navigation, but it was easier for that screen reader user to navigate. So we made the change and I think it proved very valuable for our learns.

So once we are ready to enter the development phase, building an accessible app is really no harder than building a web base platform. With web developers rely on internally developed component libraries that have been tested for accessibility to create the base for application. With native apps our developers use the operating systems built in accessibility features, accessibility API's available through apple or android and other developer tools to build an app accessibly.

I talked about focus being a challenge. Here buttons and headings and making sure that if you are on iOS that you utilize the rotor. Those are important for screen reader users. We also like to consider mobile first success metrics. We talked about read aloud and how maybe that was more important for a mobile user than potentially a desk top user or browser user. We develop success metrics based upon the platform. So success metrics for read aloud may vary a little bit than it does on desk top.

So big word of advice: Keep current with the operating system. This is for developers, designers, learners. Staying up to date with the operating system really ensures you are getting all the great new features that come with each version release. So there's a lot of accessibility settings that have been released in Apple like increase color contrast, and dynamic text sizing that can aid the user that requires an accessible environment. Let's hear from Erin. She will talk about RedShelf’ s journey to mobile.

>> Erin Lucas: Thank you, Stacy. Really it is a relatively new journey for us at RedShelf. We have always been primarily browser-based focus e reader. Just concentrating on the ability to have that available on any device even if you are taking your content off line. Obviously we started thinking that a mobile app would be a great idea for us as well. We started digging into that in late 2019. Not having any idea how important it would be in 2020. Really that did help accelerate the road map in terms of developing an app. We had four schools that were getting ready to move to a tablet provision for their students in 2020 even before COVID was a thing. So we really wanted to focus on those users and those schools to do our proof of concept.

So we were aiming to get to everyone as fast as we could but again while we might have moved a little bit towards having a longer run way, COVID made us push for something that we could release in 2020.

So we decided we would use the hybrid app approach. That would help us leverage our existing accessibility and UI to get to market faster. It was initially intended to be just a proof of concept. We just focused on the four schools and their users, but interestingly we didn't have to market it. Speaking to those digital natives who found it anyway.

So, we quickly realized mobile is here to stay. Thinking forward beyond that proof of concept and that pilot, we knew students would remain off campus in fall. Learning everywhere became the norm for everyone. We learned from the DSO how challenges it is for students to have access to WiFi. So that made mobile an enticing proposition for us. Students were expecting an app. Digital natives if they want something they will find it. Even though nobody knew we had an app, they found it. At the beginning of the fall term it had been installed almost 12,000 times. We started getting feedback and reviews and questions and all of that on really what was meant to be a proof of concept. So we took a step back and decided let's shift our focus on improving the app experience in the short‑term and not think about where are we going next with this? Are we moving away from the hybrid or go more to a native app like Stacy was mentioning. So we wanted to make sure everybody was having the best experience. Over the fall term and spring started, our installs almost tripled. Our reviews went from 1.2 to 4.2. So we felt we were on the right tract with the direction for the app. Over half of our app users are on iOS devices. It initially started at the tablet base schools who were using iPads.

So obviously we have to take into consideration a lot of things when it comes to mobile and accessibility. Obviously accessibility first is a huge part of everything that we do. We view it as a requirement and not just a feature. That's essentially across all of our products and especially our ereader. Some of the lessons learned here are really that you can't assume that an accessible desk top experience is going to be equal in a mobile experience. So there are things you have to take into consideration and while obviously the basis of the rules, if you will, are the same but you really do have to dig into the testing and find people to give you feedback and make sure that you aren't just taking the accessibility on your desk top for granted on mobile.

So we did find hybrid apps can be more challenging than native apps in terms of accessibility. So all again part of the things we look at towards the future in terms of how our app is going to evolve. We did find that iOS was less challenging than android. The Apple devices were more open to certain things and that's all the more reason to move at some point towards a native app because I think that will eliminate some of those challenges.

And really we always talk about born accessible EPUBs. We are big advocates of EPUB. To both Stacy and Darrin's point, content needs to be accessible and responsive. If we are going to continue down this path of mobile which is where we are headed, we need to keep reinforcing that shift to EPUB and support publishers in that journey.

Also in talking to quite a few DSO's over the last year or so they talk more and more about students using their mobile devices for learning. So what that really means is they have to support that as an option for their students. Learn more about how the things in the student's operating system works and the Assistive Technology built into their mobile app and faculty has to take that into consideration the way they are teaching, the way they are choosing their materials and they already have to consider accessibility as part of their materials, but this is another layer of that. So if they are not focusing on that already, they will definitely need to do so in the future.

So, thanks for listening to RedShelf's journey. Relatively short journey. Hopefully we will have more to come in the future. So up next is robin who will tell you more about those accessibility features on the devices.

>> Robin Spinks: Thank you, Erin. Students need a laptop to be a serious learner. Just reminding people of the poll. Are the accessibility features up to the mark in terms of visual adjustments, read aloud and screen reader features? For people new to this it's a simple either platform as configuring a toggle to turn on or off the screen reader. 3 clicks on voice over device. And I have just turned screen reader on or off. I'm now picking up my android device and I will hold the volume up and down buttons and the same thing will happen. So super simple implementation at the operating system level. I would encourage everyone on the webinar to look at the device that you have, your own personal device and look at enabling that short cut so you can turn on or off initially a screen reader and perhaps also magnification or with iOS you have a built-in video magnifier to read hard copy. That's interesting when people are using more and more mobile. You can use magnification but on iOS you can turn the device into a portable magnification. In terms of ease of use, the gestures for accessing magnification for low vision students are much simpler on the android platform currently. They require 1 finger rather than 3. I encourage people to have a look at that functionality and enable it on your device and become comfortable with it.

So in terms of visual adjustments, I mentioned the built-in magnifier on iOS. I encourage you to look at that because many students carry ‑‑ who are visually impaired ‑‑ a video magnifier. Now we are at a point where mobile tech is offering something that is as good built in. That's a big change. Color inversion is something I use as a low vision student every day. Color inversion is useful being able to flip the polarity of light on dark and dark on light. Most students who have glare sensitivity will prefer light on dark. It's worth checking with individuals and making sure they are aware of that functionality. I should mention dark theme. Dark theme is now available on iOS and android. It will be under display and settings. This is interesting because it would have started off as something that was seen as an accessibility feature and now with a more wide spread understanding of accessibility, many users who don't identify as having a visual impairment would prefer to change the theme. If you are someone who likes a dark theme on a device, and you use a device with a low light display that will give you better battery life. Color inversions they were able to change colors and customize them in a way that will work for an individual reader. Thinking about the fact that readers may wish to change their reading preferences depending on the time of day. Perhaps you become tired, perhaps your vision is not good in the evening and glare becomes an issue. You can change the color preferences to suit your needs.

So EPUB apps can adjust the font, the text size, the colors, the spacing. It's really worth experimenting with that in terms of your own preferences. Many people will discover that maybe a [inaudible] background is helpful. Not just for people with a visual impairment but people with dyslexia tell us that is helpful. There may be variation with time of day and tiredness. Many transition to using large text and magnification. Many are dependent on speech. It's important to think of this as a continuum rather than an either or.

Read aloud is a useful feature. Having text spoken out. Being able to create a portion of the text so a low vision reader can have a portion of text read aloud. So EPUB apps may have read aloud features or use the integrated features. A recent update into the Google assistant allows you in android 11 to be on a webpage and say hey Google, read this and it will simply read out what's on screen. That's very interesting because it allows something of the functionality of a screen reader for someone whose primary method is sighted reading. I like that because it allows me to flip back and forth in an agile way between speech and sighted reading. Thank you. In terms of screen readers we had a quick dip into voice over which is the iOS screen reader. It's also on apple OS and watch OS. That allows people to access content using synthetic speech. I encourage you to use voice over and talk back that's on the android platform. They have voice assistant on galaxy devices and then voice view which is on the kindle devices. All of the Amazon devices have speech. Everything from a kindle tablet through to another device like a show. Support for text, image descriptions, heading navigation, lists, et cetera. You can customize each element according to our preferences as well. Support in tables has to be said is okay on mobile. Support for math is really limited at this time. We haven't seen an applications on mobile that delivers a robust experience in that domain.

So consideration for mobile accessibility. Latest is greatest options for text input. Really here we are thinking about the fact that many people are taking advantage of the digital assistant like Google assistant and Siri and maybe [inaudible] on the Samsung platform and use input by dictation. I dictate 50‑60 emails a day. It's improving the more I use it. Perhaps 5 years ago a typical page of 14-point text would have 10 errors in it. Now I can do it with 1 or 2 errors. So my job is to edit that but it's a fast way of using the productivity application to improve access for me as a low vision user. There are many options for text input. You can use dictation as I mentioned. You can type on screen. Many use a Bluetooth keyboard to have a faster and more tactile input if you prefer a keyboard. That's a good way to go about it. They are very low cost and straight forward. Among the accessories there would be blue tooth keyboards. I use a tablet stand. I find that helpful because it allows me to use the tablet device I'm presenting from and I can adjust that to any angle I want. I can also fold it up and take it with me wherever I may find myself. So one of the ergonomic advantages of a laptop can be replicated through using a stand.

Also research shows that curved displays minimize eye strain. That is interesting. Many people tell us a curved display minimize eye strain and improves the engagement. So we need to see more research on that but it's interesting to think about. Maybe a USB hub in terms of connecting a USB stick. Something that can be plugged into the hub. Of course we wouldn't be doing justice to it if we didn't mention braille. Braille has been reborn in the digital age. We are seeing a rapid growth here in the UK of people accessing digital braille. So pairing a blue tooth with their mobile device. That allows them another dimension of access. Braille is a wonderful medium for literacy. It will enable people to read through a role of moving metal pins on a small device that's not much bigger than a couple of large smart phones on top of one another that will give you physical size for the latest braille displays. The cost has reduced massively within the last couple of years.

So where is this going? Investment is heading into mobile. If you talk to any company building services a lot of the investment is going into mobile. Devices and services are getting smarter. Google assistant, you will recognize the progress within that particular digital assistant.

Voice control and intelligent assistance are playing a role in everyone's lives when it comes to utilizing technology. For people who are blind or low vision they have a massive value. One of the things we can all do is reach out to the students we are working with and make sure that people are aware of the progress that's taken place in the last couple of years. It's possible to control pretty much every element of iOS 14 through voice control. We also need to be mindful of the merging of desk top and mobile. The birth of new form factors such as devices with two screens. Foldables, flip phones with two screens and a huge range of devices that are beginning to disrupt and challenge the status quo. All of this offers us an opportunity and it will be fascinating to see where this takes mobile learning in the future. It's exciting time to be in this space.

>> Richard Orme: Thank you, robin, Darrin, Stacy, and Erin for flying us through that amazing over view of reviewing whether reading and learning is going mobile. What are the views of our attendees at the webinar? Let's see the poll results. For the statement learners need a laptop to be a serious student. 9% strongly disagreed with that. 33% disagree. 24% neither agree or disagree and 31% agree and 4% strongly agree.

This leads us into the first question: We framed the presentation and what we asked people to speak to around accessible reading but to be a serious student you need to complete work. So my question to you Darrin, for that very large number of students who are using mobile devices as their primary study method, are they using this to consume content or also completing assignments?

>> Darrin Evans: That's a good question. That's part two of our survey as we dig in. There's such ‑‑ they are adept at texting that a lot of them actually do. It will be interesting to get the final numbers there. As I think Stacy or Erin was saying about the digital natives they are so used to texting that to them it doesn't seem that large of a leap to respond to say a discussion board on their mobile phone.

>> Richard Orme: Very interesting. Robin and I were talking about how these blue tooth keyboards were a thing 5 years ago, but we have seen less of those in the last few years. Robin, you talked about having a USB or blue tooth keyboard connected. Thinking back to when you were a student, would you really be reaching for a keyboard or would you use the onscreen keyboard or voice dick TIKZ? What do you need to be a serious student?

>> Robin Spinks: For many people it's a very individual choice. If you have been raised on a tactile keyboard and that's something that is your default, it might be difficult. As was pointed out a moment ago, if you have grown up with a mobile phone, probably your response is different. You are probably a default swipe texter who uses swipe texting when is efficient when you put the effort in. It's all about options really. If people have the option to use a blue tooth keyboard that might work well for some people. Maybe you want to touch type a long piece of text that may be efficient. I would use a mix of onscreen typing and dictation as my default. I think if you are prepared to put the effort in and you are happy to speak in a clear way then you can get good results from it. It won't work for everybody. The key is the choice is king here. Make sure students have the option to try out a blue tooth keyboard. Try out swipe texting and encourage them to try out dictation. It might be a different experience from one they have tried previously.

>> Richard Orme: For a student using a screen reader on a mobile app maybe their keyboard might be handy for navigating around content in some ways, but it's not a make or break decision because these things aren't so pricy and hard to learn.

>> Robin Spinks: Absolutely. Many students will tell us if they are using an iPad. They like the idea that a keyboard is in the case. It's really about what works for the individual learner. To try out different strategies is something we could all encourage people to do. Try out dictation or a blue tooth keyboard. Sometimes you don't know what will work best for you. Maybe that varies across the subjects that you are studying and maybe across the type of assignments that you are responding to.

>> Richard Orme: Now Stacy talked about the support for students from DSO's engaging with mobile technology. Certainly colleges and organizations would run training coursing on how to use computers, but I have not seen training courses for mobile devices. Darrin and robin, would you comment on the support that comes from your organizations that would help folk using reading services whether that's a library or from a college to get the best out of the mobile devices or is that not necessary?

>> Robin Spinks: I'm glad that question has come up. I think this is a challenge of our time. There's a huge amount of time assumed in mobile device. You see that when you give a mobile device to a young child. They have grown up with touch screens. There's a lot of behaviors that are natural for children to try out. If you have grown up in a desk top environment there's a lot to learn. So more functionality being added to the OS, more gestures added, richer applications that have more functionality. All of those things demand and a refresher of skills. So if you use the mobile 10 years ago for example and you fast forward to now, you probably would be able to do lots of things but there are new things that have become a default that you need a refresher on. In the UK RNIB we have a tech team and a lot of their work is around that. Making sure people can keep up pace with the technology and developments. It's constantly shifting. Unless you are a person that looks constantly at updates you may miss something.

>> Richard Orme: DSO's need to get up to date.

>> Darrin Evans: We have to do more trainings on mobile functionality really. We assume people know things that they don't. Let me put it another way. We are not always as efficient as they should be on their mobile device. So that's training that we are going to have to do and I'm going to be e‑mailing Robin and bugging him on tips and coaching.

>> Robin Spinks: You are welcome to.

>> Richard Orme: Coming to you in a moment Stacy. We have a question from [inaudible]. Could you explain what you mean by swipe texting, Robin?

>> Robin Spinks: Swipe texting will be more appropriate for people who have low vision than it is for people using a screen reader. This is enabling so that the keyboard on both operating systems now enable you to type a word by essentially moving your finger from the first letter and to the next letter without leaving the screen. So essentially, drawing a pattern across the screen which then creates the word that pops up on screen. Someone with low vision it's something that I use, but it's not going to be something that someone who is a screen reader is going to use. So that's a particularly low vision specific element. It's really about improving the speed of typing and a modern way I guess. It's about making sure that the system learns the words you would typically input and suggest them on screen.

>> Richard Orme: Thank you. Coming to you Stacy and then to you Erin. We have a couple questions from Debra. Debra was clever enough to put the questions in before the start of the webinar. So do your apps have built in magnification or text‑to‑speech or will the user work with the accessibility features of the mobile operating system. What about a student who wants to make audio annotations? Stacy first? Apps with built in magnification or text‑to‑speech?

>> Stacy Ray: Yes, our apps have both text‑to‑speech. We use the operating system to read the content on the EPUB and we have text magnification. So that's the visual displays that I had talked about where we enable the user to select font, font size and increase the font. Because it's an EPUB it automatically reflows according to the screen size. It makes for an optimal user experience.

>> Richard Orme: Great. Erin, how about you with your new app that's escaped and is being discovered by the digital natives.

>> Erin Lucas: We offer text‑to‑speech within the app, as well as the ability to zoom in to the content which is probably used more with the PDF content considering EPUB is more applicable to the display options that Stacy was talking about. We also still offer those display options with EPUBs as well.

>> Richard Orme: What about to Debra's question about audio notes? Recognizing that learning isn't a passive experience of reading content. You want to make notes and write content too. Let's hear from Stacy and Erin whether you have that feature and then to Robin how you make notes as you go through your day.

>> Stacy Ray: On book shelf we don't incorporate the ability to make audio notes. I know recently talk back android released a new update of their operating system accessibility features that enable an audible type experience. It's something we have considered but we have not added it at this time.

>> Erin Lucas: I think it's a great idea but like Stacy mentioned, it's easier on some operating system than others. I think in terms of the app that's more applicable to a native app. So that's something that I can add to our list as we move towards that native app experience.

>> Richard Orme: Robin, you are living your life and doing your day of work and study and you are reading content and you want to make notes. What's a good way to do that thinking of your own experience and other folk that you work with and support.

>> Robin Spinks: In my case I'm constantly experimenting. Right now in android 11 there's a great new [inaudible] app that is part of the operating system. If you have an android device go into search and find recorder. It will record your messages as an audio message, but it will also give you a transcript. That's really useful. You can then cut and paste it and share it. I'm also using the notes feature in iOS. I'm a creature of habit. I always have an iPhone and a pixel with me. Sometimes I'm using the Teams application. I think one of the things we have not quite seen yet is the perfect note taking application. Those are a couple examples I'm using. We hear people using quite a wide variety of note takers really. The built-in note taking application on iOS or Google one advantage is you can get as much flexibility as possible by using the native application. It's easy to share and cut and paste. The solution is the one that works best with you. We encourage learners to try out the applications and find out what works best for you.

>> Richard Orme: Wonderful. We heard a little bit about the ability to change the size of font and zoom in. Victoria wants to know what about the challenge of viewing large images on an eBook on a small screen? We can hear from many of our panelist on this. Does this work? Is this a limitation that is the physical constraints of a small display? Images and eBooks? Zooming in?

>> Robin Spinks: I think this may be simpler for people who ‑‑ low vision people using android. The reason I say that is because one of the skills that I think you need to develop if you become a low vision reader who is looking at images ‑‑ I have done this recently. When using the built-in magnifier on android one of the features is it allows you to use a pinch to zoom gesture inside the magnifier. So you magnify the image by triple tapping but if you want to eke in a little further you can do that by using a pinch to zoom movement that everybody is familiar with and you can achieve the desired level of magnification. It is a challenge, but I suggest looking at that as an option. I would also say it's sometimes easier to mirror your device. Maybe plug in a cable that connects it to a monitor or television. Or you can even stream to an Apple TV if you are lucky enough to have that. Sometimes there's a super easy way and sometimes there's a tricky way to do T. I think pinch to zoom inside android is a way of getting a fine adjustment.

>> Richard Orme: This is a broad topic of course. We are talking about accessible mobile reading which doesn't only happen in college. Let's think of all the sorts of things we have discussed today ‑‑ the world going mobile and learning happen at college and school, I will ask our panelist to think about what about learners in the school system itself and what about leisure reading? Do you see many of the things we have talked about being relevant? Darrin, what are your thoughts on that? Do you see students using ‑‑

>> Darrin Evans: In the state of North Carolina we started reaching out to our K‑12 colleagues. We are finding the younger students ‑‑ these super digital natives are really gravitating to mobile and using these technologies in ways we don't necessarily think of. We have a lot to learn about mobile, training, implementation, how we are going to really revalue or reassess our work here. We have noticed that. ‑‑ a through [inaudible].

>> Richard Orme: That's very interesting. Just as we are coming to the end of this session then you introduce the new piece that learning is already mobile at we heard from Stacy. We heard from Erin the events of last year have accelerated and then there are folk now who are coming through whose devices they clutch in their hands all day long and their needs may be different to the students who are in college right now.  
OK, we’re coming to the end of this session. Once again, thank you to Darrin, Stacy, Erin and Robin for sharing great information and a wonderful discussion.  
Our next webinar will be on April 7th, and is titled:  
“Word document accessibility: part 2” Returning by popular demand, and building on our first Word Document Accessibility session, this webinar will begin our journey beyond the basics. Through practical examples, our invited experts will share how to create accessible content using a range of Microsoft Word features, walking through the implications for accessibility in different scenarios and guiding us through how to resolve many of   
the common issues. You can register at daisy.org/webinars, where you can also sign up to the announcement mailing list and review previous webinar recordings and resources.  
I hope you will join us again soon. In the meantime, thank you   
for your time, stay safe and well and have a wonderful rest of your day. Good bye!