THE BRAILLISTS FOUNDATION

BRAILLECAST PODCAST EPISODE 32

Improving Reading Speed and Building Braille Mastery with Kit Aronoff

19th October 2021

Matthew Horspool: Welcome back to Braillecast, the official podcast of the Braillists Foundation, and coming up this time:

Kit Aronoff: If you've worked on your braille and you are effectively at the same reading level as your average middle school student, you're doing good, you're doing great. You can pretty much do what everyone else is doing at that point.

Matthew Horspool: Improving your reading speed and building braille mastery with Kit Aronoff.

 It's a question we get asked all the time. How can I read braille more quickly? To answer it, we were delighted to be joined on Tuesday, 19th October, by Kit Aronoff of Temple University in Philadelphia, Pennsylvania, and founder of Main Line Accessibility Consulting. Kit has a background in elementary education and using principles of teaching literacy to emerging readers and articles from the National Federation of the Blind, she's developed a series of strategies which are sure to benefit even the most competent of braillists.

 Our chairman, Dave Williams, led the discussion, and he started by asking Kit to describe her braille learning journey.

Kit Aronoff: I'm visually impaired as well as hard of hearing, which sort of prompted me to suddenly want to improve my braille skills a few years ago when I was diagnosed with progressive hearing loss and I was faced with this reality that I can hear for now but it's not going to be forever and I really love to read and didn't want to lose access to that.

 I actually did learn braille initially back in high school, when I first started to lose my vision, so I did benefit from high school training, if you will, but of course I went to college and didn't really keep up with it so much and so I sort of had to start, not all over again as an adult, especially with the switch to UEB, but, yeah, I needed to start over.

 I was considered an advanced reader, which in braille, at least in the United States, typically just means that you know the braille code and that you can read well enough to read a braille label, which of course is not advanced. If you ask any other educator on the planet, that's pretty basic level. So I really had to go at it on my own, to figure out how was I going to improve my braille skills if I wasn't being given any sort of money to pay for a tutor and I didn't have access to any sort of training anymore as an adult. It's kind of like, well, why do adults need braille, kind of attitude. So, I just had to figure it out. That's what forced me to really think about learning strategies and how to really help myself learn braille well and continue my education.

Dave Williams: Is what you're saying then, Kit, that actually one of the biggest challenges for you in learning braille was low expectations?

Kit Aronoff: Yes, definitely, as an adult learner especially. I don't know how it is in the UK, but certainly in the United States, once you hit a certain point, you're considered advanced and no longer eligible for formal braille training.

Dave Williams: Right, and that level is basically when you can read a label?

Kit Aronoff: Yes, or maybe kids' books or something, very simple stuff. If you're lucky, you even get to learn the whole UEB code, but a lot of folks actually never really learn the whole code.

Dave Williams: So, what did you do about that?

Kit Aronoff: I started in elementary education and I left that and did something else, but the classes that I took primarily focused on literacy skills and I've used those in a few areas of life but when I went to re-approach braille, I started with that, because I had scoured the Internet to find how to improve braille skills and there's just not a lot there.

 So, I went back and started to look at my course materials from my literacy courses and I felt that I could apply that to my braille reading. It makes sense. Braille is reading. It employs the same kind of skills that you need for print reading. It's just in a different syntax. So, there's no reason it wouldn't have worked. So, that's how I started to build the strategies and as I've got more experienced, I've got a lot more interested in cognitive learning theories and things like that, so I've got to understand a little bit more about motivation, for example, and challenges that adults face in motivation, just general myths about adult learning. A lot of adults think they can't learn new things, for some reason, or that kids have some kind of advantage when it comes to learning languages or learning how to read and I found that to actually not be true.

Dave Williams: It's stuff we're told as kids and we just regurgitate without really thinking. I want to get into some of those strategies and techniques and how we challenge some of those myths in some detail in a little while. Tell us a little bit about your role at Temple University in Philadelphia.

Kit Aronoff: I'm an assistive technology specialist slash coordinator. I help coordinate accommodations for students with disabilities. I do assistive technology consultations. I do specialise in braille technologies in particular. I'm super interested in braille learning and tactile graphics learning and those types of things. I'd really like to pursue a PhD investigating tactile learning techniques. So, that's what I do here at the university.

Dave Williams: Then you also have a company as well, a consultancy business, is that right?

Kit Aronoff: Yes, I did start doing side consulting because I wanted to work more with folks one on one, because what I've discovered is that people acquire a disability themselves or a family member does, and then they just get stuck. They don't know where to go. Information about where to get started is really a bit hodge-podge, here in the States. Sometimes doctors won't tell you where to go. So I wanted to fill that gap. Here's what a social worker does, here's what the state resources are. I wanted to be that connection for folks to just get them started on their journey.

Dave Williams: In your bio that I have here is says that you are passionate about building braille mastery. How would you define braille mastery?

Kit Aronoff: I think everyone defines it differently for themselves. One of my core beliefs is meeting people where they are. Everyone's going to say that they've mastered braille at whatever level that they envision that for themselves, because the truth is you never really master something. You're constantly learning and evolving and changing. I can define it for myself.

Dave Williams: Well, define it for you. What would mastery look like for Kit?

Kit Aronoff: For me, I would really like to be able to pursue a PhD ultimately, even with progressive hearing loss. I want to be able to read complicated technical materials. I want to be able to read science journal articles and those types of things. So for me that's my global long-term goal. Also just generally I'd like to have a sense of confidence, a sense of love of braille, fostering a renewed love of just reading in general, that I think sometimes as a beginner braille reader you lose that because it becomes work, doing your daily 20 minutes of braille practice. I think once you find the joy, that's where mastery starts.

Dave Williams: During the first COVID-19 lockdown in early 2020, at the Braillists Foundation, we've found that often now, people learning braille are doing so effectively in isolation and not necessarily coming into contact with other braille readers. What do you think are some of the other areas where people hit problems? More importantly, how do we overcome those?

Kit Aronoff: I think your programme addresses the absolute biggest problem which is that isolation that you're talking about. In my braille journey, it has been very lonely. I've been very alone in this because I find that most adult folks, who are blind, that I know at least, aren't so interested in learning braille, so I didn't have the camaraderie there and my friends who've been blind since birth, many of them already knew braille. So, I also didn't have that camaraderie because I lost my vision in high school, as a 15 year old. So I'm kind of in the middle.

 I think also the social barrier is really challenging. Are your friends willing to celebrate your successes? Your spouse, when you tell them, "Oh, my gosh, I read this page twice as fast as I did two months," are they going to say, "Wow, that's awesome, let's go have some cake," or are they just going to say, "Oh, that's nice, honey," and just move on. If you don't celebrate, if you don't have a community to experience those successes, you're just going to lose motivation, not because you don't have the willpower, but just it's lonely.

Dave Williams: There were so many things wrong with my own introduction to braille. I remember at school being asked to stand up and read in front of the class. My reading speed was really poor and I found the whole experience really quite humiliating. The content that was available didn't appeal to me either. There was nothing that I actually wanted to read, so I wasn't motivated in that way. I also remember being asked to test braille equipment that didn't really work very well and so I found that experience quite frustrating. It wasn't until I had a really strong reason to use braille, not just in a work context but in a very personal family context. People are probably sick of hearing me talk about reading the bedtime story with my sighted son. It was something that I really was keen to do when I became a parent and it was a real wake-up for me. It was my braille renaissance when I suddenly realised how powerful braille was, and actually you can do quite a lot even if you're not in the top 10% of braille readers in terms of speed.

Kit Aronoff: Absolutely. Most reading material, again in the United States, because that's where I do most of my work, is at an eighth grade reading level, so for 13 year olds. That's the average reading level of adults in the United States. So, if you're reading something like the New York Times or something like that, it tends to actually be written for that level. So, sure, if you've worked on your braille and you are effectively the same reading level as your average middle school student, or whatever the UK equivalent is, you're doing good, you're doing great. You can pretty much do what everyone else is doing at that point.

Dave Williams: Kit, we'd love you to share with us what you've found and some of your most effective strategies that you think braille readers would find helpful.

Kit Aronoff: Sure, I'm going to try and break it down.

 I would say the first thing to understand is that reading, writing and studying are all equal parts of learning braille. I think when adults approach reading braille, they're thinking, "I'm going to learn how to read and that's what I'm going to do and this is how it's going to be." Writing is such a key component to reading, because it gives you an opportunity to not only be a participant in absorbing the braille, but creating it as well. So it allows you to think in braille, it allows you to create those connections. For example, I don't know if anybody's had this experience, but the word "sword", for example, I always read it as "s-word" because that's what the contraction is, right? It's the letter "s" and the contraction for "word". I remember the first time I came across this, I was thinking, "What on earth is "s-word"? What is this crazy thing?" It was through writing that words like that became more fluid and more automatic because I was already thinking in braille, I was engaging in it. So, that's one tip that I recommend.

 A lot of times, people think, "Oh, I'm going to start practising writing my work emails in braille." Don't do that. Really don't recommend that. That is going to stress you out. You're going to write slower in braille. I know I practise my braille writing but I type at something like 90 words per minute, I type braille at something like 20 words per minute or something really low. So, you're just going to stress yourself out.

 You want to pick an opportunity that's low key. I highly recommend writing a journal as a brailling, writing exercise, or even just having a friend read a passage of something out loud and have you transcribe it and that's another great way to practise your braille writing.

 So, writing is definitely something that I highly recommend, along with studying. There's going to be contractions that you simply can't learn unless you study. I hit a point about a year ago, where I figured out that I was getting tripped up by monetary values, numbers were really slow for me. The bold symbol, the underline, the italics, those are the kind of things that if I run across them, I sort of stop and say, "Okay, here's a symbol I don't know," and then I'll just gloss over it, but because I don't know it, there's that hesitation and then I move on. Being able to recognise it, meant I could smoothly run through it and I got more context.

 I can only do that by studying. It's hard to run into bold on purpose out there, in the wild, if you will, when you're reading. So, definitely keep in mind just those study skills.

 So, those are the two components, and then of course reading itself, making sure you're using physical braille for your braille practice. I don't want to exclude digital braille. Physical braille can be tricky to get a hold of, but there's real value in using physical braille. Nothing will improve your braille skills quite like reading an actual big old braille book. So I often recommend, for that time that you're specifically dedicating to practising braille, having a book, having a physical magazine that you can put your hands, because it's going to give you the tactile spatial awareness skills. It gives you the opportunity to learn how to scan, look for paragraphs, find your place. If you're like me and you get lost really easily in text, I really like just knowing where I am in a book, whereas in digital braille, it would be, "You're somewhere in the sea." Will you hit the end of the book in ten minutes or in three hours? I don't know.

 So for me I like it for that global context, but I guess if I had to pick three things as study strategies, those would be my three big ones.

Dave Williams: Yes, writing is so important. You said journalling. I guess we would describe that as keeping a diary.

Kit Aronoff: Yes, keeping a diary is great. A lot of people think they have to put down their deep dark thoughts, but, nah, you can just write down the weather. I learned a lot of braille from just writing out what was happening in the news, especially during the pandemic when I was freaking out. For a while there, I was just really summarising what was happening in the news that day, but I got to practise a lot of things like percentages and numbers and a lot of really specific things that I wouldn't normally write. You could also write things like the weather, "It's cold today, it's 45°." How often do you really use a degree sign? So, it's a good opportunity to practise those weird symbols that you don't always think about.

Dave Williams: I know what you mean about the contractions. I think it was Robert Englebretson told us he was struggling with the "A-N-D" sign in "pandemic".

Kit Aronoff: Yes, that one's tricky. I get "ance" and "ence" confused a lot.

Dave Williams: And how do you resolve that? I bet you're not alone.

Kit Aronoff: For that kind of stuff, that leads into what I learned in my literacy classes. Children learn what are called sight words and if you're not familiar, sight words are words that a sighted child or a sighted personal in general just learns to see and just know what it means. Things like the word "the", for example. A reader is not looking at that and saying, "T-H-E, the," they're just looking at the general outline and then their brain says, "Oh, that's the word "the"." And then on we go. In braille you want to basically build up those same sorts of skills of recognising.

Dave Williams: Right. So you might write the word "dance" or something, for example, so then you would always recognise that it's an "ance".

Kit Aronoff: Exactly, and just practising that, so again back to that studying, creating flash cards, writing down spelling words, Googling words that end in "ance" or "ence" and just practise "dance", "presence", words that are going to force you to go back and forth between something that maybe is challenging for you.

 We were talking too about strange things in the middle of words. "The" ends up in a lot of weird places in words, like "theory". "Theory" really throws me off every time I see it, because it's "the-ory". What is this? It's another sight word. If you read it often enough, eventually it'll just be "theory".

Dave Williams: Let's take a couple of questions, Ben.

Ben Mustill-Rose: Thanks for that, Kit, great tips so far and we've got quite a few hands raised already. We're going to come to the caller on phone number ending in 689.

689: I'm curious. I'm getting the impression by hearing you talk for the last couple of minutes that the reading you're talking about improving speed on is more hard copy braille, than it is digital braille. I'm quite a fast braille reader as it is already and I've gone almost exclusively to digital braille now. I've read braille since I was six years old and I probably read braille out loud about as fast as anybody could read. Now, obviously, when my husband sight reads, if he's reading to himself, and he's talking speed reading, he's going to beat me, there's no question about it. But I'm assuming the way I'm reading most of my braille, you probably don't have a whole lot of tips in doing much with that or improving it. Would that be correct?

Dave Williams: Could we just get your name, please?

Shirley: Yes, my name is Shirley.

Kit Aronoff: Yes, so first of all I mostly read digital braille also. I think the reality of the situation is that most people are going to read digital braille most often. What I find from digital braille is that reading it has not made me into a better reader, per se, for the most part, or it doesn't make me faster. It does help me build sight words and any kind of reading is better than not reading, of course, so digital braille is amazing and it's been such a great opportunity to have access to all these books. Even from 15 years ago, I was struggling to find certain types of books, and I can just go on BookShare and find as a digital braille file.

 What I found is to really improve on digital reading, physical braille is really where you get the most bang for your time, if you will. So, while it's not something that I think is reasonable for most people to say, "I'm only going to read physical braille all the time," that's not a reasonable expectation in today's world, but having a few days a week that you set aside for specifically picking up a book or a magazine. I have a subscription to something that's printed by RNIB. I subscribe to PC World News, National Geographic and Poetry magazine and it's just a fun thing to keep in your house, pick up when you feel like it, put it down. But you're right, digital braille is what you're going to see more of and I'm not knocking it. The last ten books I've read have been on my braille display. I'm really not a poster child for reading physical braille, but for learners, I do think it's really the way to go.

Dave Williams: Correct me if I'm wrong, Shirley, I think what you're asking is if there's anything for digital braille readers that would help us kick on.

Kit Aronoff: If all you have access to is digital braille, just reading, any reading will help you improve. One of the things that I do recommend is varying what you're reading. Obviously all of us as humans have natural interests, so you're going to read whatever interests you the most, but what happens is the stuff that interests you the most is going to have repetitive vocabulary and, in order to improve, you need to build on your vocabulary and those sight word types of things. So, branch out, read different things that maybe aren't your normal cup of tea, per se, and trying to just explore different types of genres can be really good. That would be my best tip.

Dave Williams: For me, it's reassigning the buttons. If I have to pan forward with the button at the right end of the line, I find that my reading speed is much slower and that tends to be default on many devices, and actually if I'm using the scissor reading technique, then my left hand is already back at the start of the line, ready to push the button. So, I tend to reassign what the panning buttons do, reverse them, so that my left hand can press the button to pan forward, which sounds counterintuitive when you say it, but actually for me in terms of my reading fluency, it just makes much more sense. I guess it could be different for somebody else, depending on which is your dominant reading hand. Then of course there are digital braille readers who would prefer thumb keys and so on. So, I suppose the ergonomics of the device might make a difference.

 Have you any thoughts about line length? That's something that is often debated about what is an optimal line length for a digital braille display.

Kit Aronoff: Well, first of all, I think your solution is really clever and I've never thought of doing that before. I've remapped buttons but it's never occurred to me to remap the panning button and I'm going to have to play around with that.

 As far as length, shorter braille displays, I think, slow you down a little bit because the more mechanical things you have to do with your hands, just because it's going to take you a certain amount of time to push that button and move your hand, and there's not a lot you can do about that. So longer braille lines do help. I like 40 for me personally as my ideal for reading, because it gives you a nice pace and it's small enough that I can still fit it into a particularly large purse or a backpack or something, so I have my braille display that I bring from home with me just to read my book during the day.

Ben Mustill-Rose: Thanks for that, Shirley. We're going to come to Elaine in a moment or two. You raise a really good point there, that I just hadn't considered at all about trying to vary the stuff that you're reading. Like you, I'm fairly into my tech content, and you're right, there are just words that you won't encounter or contractions that you won't encounter when you read one specific genre.

Kit Aronoff: Absolutely. What I recommend the most is poetry, because poetry is very weird and by weird, what I mean by that, is you can't get into a rhythm with poetry the way you can with prose. I don't know if you have this experience, but when I start reading a book, I'm a little bit slower than when I end a book, and 100%, it's because I've learned the author's style and I've just accustomed myself to it, but poetry, it's short, the lines vary in length, the words don't always flow together in the way you would expect, so you can't do quite as much predictive reading. As adults, we're predictive reading all the time, just because of our literary experience. So, I highly recommend poetry as a practice.

Ben Mustill-Rose: Great tip there.

 Elaine, you are good to go. After Elaine, we're going to come to Toby.

Elaine Maries: You might have answered this, but I suffer from dyslexia, so I just wondered whether there were any tips for people that are dyslexic as well or is it just a matter of practice?

Kit Aronoff: It's definitely partially practice. Reading along with something is really beneficial. There's tons of software that highlights as it reads out loud. I don't think there's anything like that in braille per se, but one thing you can do is pair an audio book with either a physical book or digital braille and sort of get that opportunity to read along with something and you can slow it down to whatever speed you're comfortable with.

Ben Mustill-Rose: I noticed that James Bowden has his hand up and I suspect that will be a comment.

James Bowden: It actually is a question, not a comment, but there was a very interesting question in the chat and this is possibly more important than mine. Someone asked, "What's the best position for your hands when reading hard copy braille?" They find their wrist aches after a while.

Kit Aronoff: So, ergonomics-wise, of course you want to try to keep your hands in a neutral position. So, whether you're reading hard copy braille or whether you're using a braille display, you might need support for your wrists. So, for myself, when I'm using my braille display just on my computer, I actually have a wrist pad that you would normally use for just a regular keyboard and I find that really gives me a lot of support for my wrists. But you really want to find a nice neutral position, with your elbow at that 90 degree angle, you want your wrists to not be extended back or forwards too far. You want them to be in that nice comfortable, flat position or maybe flat with just a little bit of an arch forward. I say arch, very gentle arching forward. For physical braille also, you want to be in that very nice position. I really like to read on my lap, so I have a desk-lap thing and I actually use it backwards because I think that the thing that's meant to keep the book on works better backwards, but that's just me. A lap tray can be really helpful for that. But, yeah, it's really about getting your chair into the right position if you're reading on the table.

James Bowden: Okay, thank you. So, my question was, do you ever use or do you find useful the auto-scroll function that some braille displays or screen readers provide?

Kit Aronoff: I've never used it. I know it exists but I'm always scared to use it because I know I like to reread things a lot. I think for myself it might be an interesting exercise in speed reading, but I've never tried it.

 It could be beneficial for improving speed, because it's going to force you to get better, if you continuously increase the auto-scroll incrementally, so it is definitely a strategy that you could try.

Ben Mustill-Rose: We're all learning, aren't we? We're going to Toby and then Elizabeth then Gregory.

Toby Davey: I learned braille probably 20 odd years ago and I use it quite a lot, but I'm not a particularly fast reader, in some people's eyes. I read a lot, I read bits through my iPhone and sometimes what I find is I get bogged down, and it might just be me because of my reading, but is there any advice on how to keep your flow of reading constant and not get bogged down in stuff?

Kit Aronoff: A guideline that I suggest for folks practising braille is one I call the 75/25 rule and what I mean by that is 75% of your reading should be something that doesn't feel a slog or frustrating, and that is to really foster and facilitate it being a positive experience. As humans, we don't want to do things that make us sad or frustrated or miserable, that's the opposite of what you want. You want to associate good things with reading. So don't overly frustrate yourself. The other 25%, I highly recommend being a moderate challenge and this can be tough as an adult and emotionally difficult. There are many things about losing your vision that are really difficult but one of them is reading. It's such a fundament skill that we all learn at such a young age that losing that is an extremely emotional experience and re-learning to read through braille can also be an emotional experience. You want to jump into those books you loved but it's really important to take the time to read things that are on your level, as a reader, not as an intellectual adult human, and engaging with that and trying to practise being okay with maybe reading books that are more geared towards kids. If you're reading at the same level of a typical eight year old, that's fine. That's okay, as long as you are able to read and enjoy it. I don't know if that answers the question.

Dave Williams: Well, I was going to add to that, on the iPhone specifically, often I find that minimising the distractions can also help with focusing. So, turn off notifications, lock the screen orientation and select a reading app that you know works well with braille and try to read in there if you can. I use Voice Dream Reader, but other people might have other recommendations.

Ben Mustill-Rose: We've got a few more hands still to go. We're going to come to Gregory next and then Iain.

Gregory Hinote: I just want to make a comment. I agree very much that peer to peer learning is so important. I consider myself an older braille learner. I'm updating to UEB and having a buddy to learn with is so helpful. I joined a weekly braille learning programme in the States called Braille Together and we are joining together here in break-out rooms with our peers learning braille and it is so important.

Dave Williams: Thank you for sharing that, Gregory. It sound like Braille Together is similar to what we're trying to offer in the UK.

Ben Mustill-Rose: Yes, thank you. We're going to come to Iain next.

Iain Lackie: I was interested to hear the comment about reading along with an audio book and this is actually something that you can do if you buy a Kindle book and you also have the Audible version of it, the Audible companion. I've tried this and it might put you off but at the same time it can be fun. The other point is, I would have thought that one of the things that would really help to increase your reading speed is by trying to read braille with both hands, with one hand going ahead and the other one catching up. I would even do this on a 14-character braille display and still use two hands.

Kit Aronoff: Yes, absolutely. There's been studies that have shown that the top 10% of braille readers all use two-handed techniques when reading braille and they're also able to recognise braille on multiple fingers, not just reading with their index fingers, and those types of things. That's definitely an important part of learning how to read.

Ben Mustill-Rose: We're going to come to Rhonda next and then SJ Potter.

Rhonda Mencey: I just wanted to thank first the Braillists and also Kit for this timely conversation, as I'm in a similar situation. I'm losing my vision and losing my hearing both at the same time and also re-learning braille and I just wanted to comment on the fact that I find having a combination of braille and audio working together helps because it also helps with attention. I find that if I just listen, I become easily distracted but using the braille along with the audio allows me to maintain attention and comprehension.

Kit Aronoff: Absolutely, I'm glad this has been beneficial.

Ben Mustill-Rose: We're going to come to SJ Potter and then Terry-Ann.

SJ Potter: Quite a few things that I could say but I'll stick to just a few very quick things. I teach braille to young people, a lot of whom have come to braille later in young life, if you know what I mean. I do recommend that if students practise on their own and sometimes they do, that they read a simpler book so that they don't get stuck so easily if they're reading on their own and they're still encouraged to read.

 Another point I'd like to make is that although I totally agree that reading speed is a good thing to improve and I'm not discrediting that, I do think of more importance is understanding what you've read. Even in the sighted world, there are some very, very fast readers, but if you ask them what they've just read, they wouldn't be able to tell you.

Kit Aronoff: Yes, braille speed is definitely not everything. Understanding what you're reading is totally crucial and I love what you're saying about easier reads. That's something that I tell people all the time. Don't frustrate yourself, reading should be fun.

 I think adults tend to be focused on reading speed and there are reasons for that but another reason is if you're out there on your own, like I was, it's very difficult to see your own progress in learning when you're just in the weeds, if you will. For me doing self reading assessments, and if you're not familiar with that, I modified it a little bit, but basically you set a one minute timer and you read until you can't read anymore. You don't speed read, you just read at a comfortable natural pace for your understanding of the text, and then you count how many words you read in a minute. What's nice about that is it helps to give you a sense of accomplishment, because you're able to see numerically that you've increased by this much in the last five months or whatever and I feel like you don't typically get that as an adult. I know for myself, I only ever notice that I get better, once a year, because I'm Jewish, and at Rosh Hashanah time when I'm reading the prayer book, that's when I notice it the most, because every year I get a little bit faster and I'm able to keep up with the services a little bit better every year. But once a year is an awful long time to wait until you get that sort of satisfaction. However, speed is not everything, absolutely not.

Dave Williams: I think we all recognise that point, that you hear sighed people speed reading something and they can gabble away at hundreds of words a minute and then you ask them a question about it and they don't know, they've no idea. It's like they're on auto pilot. So, yes, understanding is key.

 Is there any evidence about retention and how that plays out? I find if I listen to something with the screen reader, I can understand, I think, at 400 words a minute, but then if I read it in braille, actually I remember it, it stays with me longer.

Kit Aronoff: Everyone has a different learning style, so for some folks who might have more of an auditory learning style, maybe audio books are great. If you happen to be visually impaired or blind and you also have an audio processing disorder, audio books aren't going to be as great for you.

 I know, for myself, I have ADHD, and something that I struggle with, and I kind of alluded to this earlier, if I don't have a global perspective of where I am in space, in a book, I get very disoriented. I actually find single-line braille displays to be very disorientating and I absolutely cannot take tests like that. I can't figure out where things are and I don't know how to go back and find what I'm looking for. But for other folks, it might be totally different, so I really think that just comes down to learning styles and we see that with sighted students too.

Ben Mustill-Rose: We're going to try to really quickly squeeze two more people in. We're going to come to Terry-Ann and then Kate.

Terry-Ann Saurmann: When I transitioned from EBAE, English Braille American Edition, to UEB, one of the difficulties I've had is word recognition and the word that comes to mind is the one you mentioned, "s-word", but if I were to see that in EBAE, I would immediately recognise it as "sword". A lot of the criticism I'm hearing from braille readers who have been reading braille for a while is that I don't like UEB because there's so many symbols in there that I don't understand and if I'm pleasure-reading, I don't need these scientific symbols or these maths symbols. How would you respond to that?

Kit Aronoff: One of the advantages of UEB and why they made the change, and I'm just going to call it old English, but the old braille code was really hard to integrate into a 21st century world. It was intended to be read out loud and follow phonetics, whereas now we have computers creating braille files for us and we've got Twitter and Instagram and all these things and it was really bizarre to navigate a digital space using the old code, I felt like. I know when I was on Twitter and stuff, it just came across as strange.

 So, I think the reason for the code shift was primarily so that your screen reader can more accurately translate the braille quickly. A real person transcribing braille is best and I'm not going to argue that, but when you're on the go and you're a professional and you just need this thing to be in braille, I'm going to stick it in Duxbury, ctrl-T, translate that sucker into braille and off I go, it's going to be much more accurate now because of UEB.

Ben Mustill-Rose: It's the question that never quite goes away. We're going to come to Kate now.

Kate Clark: I've really enjoyed listening tonight and I do feel a bit like an imposter because I'm fully sighted. I'm listening on behalf of my daughter. She's 11 and she's a braillist and has been since she was three and this is the question that we seek out most in her 11 years, is how do we get her to be a bit quicker. She was always very left index finger dominant and it hasn't really changed pretty much. She will use two handed technique but doesn't really read with her right fingers at all, they just kind of follow along. I just wondered if you had any practical advice of getting her other fingers to work a bit harder, without just telling her not to read with her left hand, or even how to use multiple fingers, because if she does use her right hand, it's only her right index finger.

Kit Aronoff: The folks at Braillists might be able to speak to that more.

Ben Mustill-Rose: We've got Mel with a comment on that.

Melanie Pritchard: There's a couple of things and we might perhaps take this offline. But quickly, and just to reassure you in a way, I've been reading braille for years, and I'm sure I only use one finger on both hands, I think. I don't think I use multiple fingers and I read reasonably quickly. So, it's amazing what you can do , just with a couple of fingers. Don't be too focused on trying to get her to use loads of fingers. As long as you enjoy your reading and you read something that you want to read, it's that motivation that gets your speed going, I reckon.

Dave Williams: Ben, did you have any final questions that we wanted to just sneak in?

Ben Mustill-Rose: Really quick one from Rebecca in the chat. Rebecca is supporting a teenage student who is reading Grade 1 and she's wanting to increase their reading speed relating to sight words and high frequency words. Apparently they're only getting around about three words a minute at the moment.

Kit Aronoff: I think it's one of those things, if that's their reading level, starting with early reading books or earlier picture books. Grade 1 braille is challenging because at that point you're really at braille introduction phase. I know a few people out there who are super good Grade 1 braille readers. I am not one of those people. If you hand me something in Grade 1, I really can't read it, it takes me forever. So, my answer would be as a learner transitions into Grade 2 UEB, that speed will naturally come and those sight words will build up as you go.

Dave Williams: Thank you very much, everybody, for interesting questions as ever, and special thanks to you, Kit, for joining us. We really appreciate it. I understand that you have also prepared a little bit of a booklet to support the session, which we'll also be making available along with the recording on the website.

Kit Aronoff: Yes, definitely, and thank you so much for having me. I love talking about braille. I'm a huge braille enthusiast, so this was really fun for me, and I will be sending that booklet along, as soon as somebody has read over it so it's a little nicer to read.

Matthew Horspool: Kit Aronoff, bringing to a close this episode of Braillecast. The conversation was hosted by Braillists chairman, Dave Williams, and moderated by Ben Mustill-Rose. You'll find links to a lot of the things that we were talking about in this episode in the show notes.

 We hope you've enjoyed this episode of Braillecast, the official podcast of the Braillists Foundation. You can find more braille-related content by subscribing to Braillecast in your podcast client of choice, or listening to Braillecast: Connecting The Dots For Braillists Everywhere, on your smart speaker. You can also find past episodes on our website at braillecast.com.

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 Finally, if you like what you've heard, spread the word. New listeners are always welcome. So if you know other people who are interested in braille, please tell them where to find us.

 In the meantime, on behalf of everyone at the Braillists, thanks for listening and bye for now.

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