**Event ID:** 2640283  
**Event Started:** 8/26/2015 3:48:04 PM ET

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[Robin Sitten] We appreciate all of you making time to spend with us this afternoon particularly in your summer months so we are giving people a chance to join us. People are coming in now and we will get started soon. Many of you have best to bury the times a day to provide these webinars so we are trying later afternoon to try to accommodate everybody's schedules. I know it is difficult in the summer so thank you for joining us today.

Welcome everybody to Perkins e-learning webinar series. Please continue to introduce yourself in the chat window. I do have some introductory remarks so feel free to do that while I'm speaking. Today is Wednesday, August 26, 2015. My name is Robin Sitten and it's always my pleasure to host these webinar events and welcome you to today's presentation. This is Student Centered AAC Design and Intervention: Practical and Collaborative Approaches for Learners with Visual Impairments and Additional Disabilities. This is part two of a two part event and in this part we will address implementation for AAC systems. If you missed part one earlier this summer you can find a recording on her website, perkinselearning.org. Perkins e-learning webinars are presented throughout the year on a monthly basis and you may register to attend live at no fee or view recorded webinars at a time and place that suits your schedule. The webinar series is one of the offerings in our professional development program which includes publications, newsletters, webcasts and classes online and in person as well as self-paced study. You can see our listings at our website which again is perkinselearning.org.

In today's presentation by Megan Mogan and Chris Russell we will consider the unique needs of early communicators with visual impairment and additional disabilities including deaf blindness, when implementing augmentative alternative communication, or AAC systems. If that is a new term for you, you will hear it a lot today. If you work with students with multiple disabilities which may affect their communication development you may be interested in some of our other upcoming instructor led classes on autism and visual impairment, CVI, ABA strategies and their assistive technology class for designing support for your students who have multiple disabilities. Before we get started I’d like to review couple things about the technology. We do mute your lines. It helps keep the noise level down but shortly we will provide a question and answer space and we encourage you to post questions as they occur during the webinar. We will do Q&A at the end but feel free to write them at any time. We put them together at the end to ask our presenters. We are using this meeting room for audio so you want to make sure your volume is on and turned up. You'll find external speakers or personal headphones give you the best audio. You do have individual controls for your screen for audio and video. Part of this introduction is to give you time to make those adjustments. Audio and video sometimes may not be in sync for you. This is usually due to Internet connectivity. We can't control it on our end. It usually resolves itself with your connection but if you find it distracting or confusing to have the video out of sync with the audio, you can minimize or remove those video windows. Our two speakers today, Chris and Megan are not in the same location so when one is speaking the other will freeze their camera, that is intentional. If you see one of them frozen that was meant to happen. Finally, our event is being recorded and will be available tomorrow at the Perkins website including the downloadable version of the slides you will see today and a couple of other handouts. We encourage you to use webinars like this in your own in-service training. They make great discussion topics and brown-bag events.

Let me introduce you to our speakers. Megan Mogan is a speak language pathologist at the Arizona State school for the Deaf and Blind at the Tucson campus. She specializes in working with students who are blind and visually impaired Web additional disabilities including deaf blindness. Christopher Russell is the project coordinator for the New York Deaf blind Collaborative and has experience as a classroom teacher and a teacher of the visually impaired working with children who with visual impairments and additional disabilities including deaf blindness. I'm going to turn the program over to them and let me welcome Megan who will get us started.

[Megan Mogan] Hi everybody. It's nice to be with you all. Thank you for joining us even if you're in your summer break. I have been in school for almost four weeks so I don't feel too sorry for you if you are enjoying your summer.

We’re going to head a get started right away because we have a lot of information to cover today. If you did join us for part one, that's great. If you did not we are going to briefly review it today for you. We are going to talk about some philosophical approaches that will guide us in our implementation of AAC with our students who are visually impaired and have additional disabilities. We’re going to talk about presentation and interaction strategies. Specifically, Chris is going to talk about that, and how we even begin the process of implementing an AAC system with the student whether for the first time or adding a system into the mix. We’re going to discuss functional AAC implementation. That may be a fancy way of stating it. I just want to provide you with some strategies that you can get started with, even tomorrow if you’d like. We will discuss ongoing assessment as you know once we get the ball rolling, it's important to continue all of our observations and keep assessments up to date in case we need to make changes to our systems or updates. We have some resources to provide for you and obviously hopefully if there is time for Q&A at the end we can include that as well.

Let's get started with a brief review. Robin was nice enough to let you know where the link is to get to part one if you want to review that information in depth. Chris and I spoke in May about collaborative approaches to the assessment and utilizing the members of the team and their unique backgrounds to combine skill sets to provide the most accurate and up-to-date information on students. In doing so, providing a number of different AAC systems to not only help students express themselves if needed but also to receive information. Communication is the two-way street where we’re sending information and receiving information from people. Those systems may look different from one another. They might be tech or paper-based. They might be more high tech or digital. They may contain tactile features or visual in nature. All of those considerations were discussed in our first webinar.

I spoke about vocabulary selection for our students. What messages are a part of the systems we design? How do you go about beginning to choose messages, something our students would typically express across functional activities. Finally, Chris spoke in depth about system and symbol adaptations, things like color and glare, or looking in depth into learning media assessments and functional visual assessments and the considerations we would have to make including students sensory and functional vision performance in the systems that we design for students. That is just basically the short of it regarding our last webinar.

[Megan Mogan] I want to talk briefly again today as well about an overall communication approach and philosophy of communication in general, not just in the subset of augmentative and alternative communication, and how that approach can really help guide us to successful implementation and we will talk about collaborative teaming again and something we refer to as the communication bill of rights.

When we’re thinking about the teams we are on back in our own systems and own schools, and you sit back and you have the device or a system and you’ve designed it and have gone to great lengths to make sure it is an accurate portrayal of the messages that will make the student a more independent communicator among their same age verbal speaking peers. Now that we have it, what do we do with it? It’s time to get our hands dirty. Whose role is it to plan the aug-com system in which that system is going to be placed? Whose role is it to really provide quality access to the system and get the students hands or eyes on it or their ears listening to it? Whose job is it to teach and model system use? Is it my job to model use of the system and those routines so my student has access to what it looks like, it sounds like, and feels like in that communication mode. Whether they are receiving information or sending it. Whose role is it to monitor progress and keep up-to-date assessment information and once we have that, whose job is it to update or modify the system if needed? There is no right or wrong answer to any of those questions. Chris and I put together a resource and it is added on as a handout where we offer guidelines to these specific roles of whether a speech language pathologist, teacher of the visually impaired, and guide you to what the roles might look like in the context of implementing a com system. Like I said not all speech language pathologists have a background in visual impairment. Chris I am sure can agree that not all teachers of the visually impaired feel comfortable taking up a bigger role. We are in this together and my motto is everyone is doing the best we can. As long as they function as a team that is the best we can do.

We want to look at up-to-date training whether that is pre-service, learning a new system, in-service training, training staff especially if you have high turnover. What systems do you have in place? I love peer training because what better way to get students connected with one another for more authentic interaction been using each other's aug-com systems whether they are verbal or not. One of the things we want to talk about is a shared approach. We'll talk about that in a little bit in a philosophical approach and sharing the same ideas about how we will implement a system, but also, I work more as a -- basis so if I'm only in the classroom to times a week I have to make sure I am modeling and providing training to the person with the student all day, whether that is a deaf blind intervener or instructional aid. Likewise, I depend on the people with the students, the classroom teacher or the instructional aid to release their roles to me and let me know how the student has been interacting with their system or ways in which they feel the system can be used in a different routine or carried across to other parts of the day or with different partners. I rely with people with the student to give me that information and they rely on me for questions or updates they may need regarding the system.

I help most of you have seen this document called the communication Bill of Rights. This is out of my professional position, the American speech language and hearing Association and basically any person with a disability has a basic right to communicate. It is as basic as that. I want to go in depth because it is an overall general Bill of Rights for communication but I want to take it a step further for a students or visual impairments and learning disabilities. There are considerations we need to take a step back and think about when we are getting ready to implement an AAC system. One of those things we have to consider is especially with the student is receiving information from another person. Yes, they may have a system to help them express themselves but when they receiving information from another person, are those forms accessible to our students? If the forms are nonverbal such as a shift in eye gaze to look over at a different topic or a point, many students do not have access to those forms and so that will affect their use of their own system if they don't know what the topic is that someone else is referring to through their eye gaze, through their body turn, through their non-specific body language. We want to make sure our staff is highly trained and considers additional rights of the early communicator with a visual impairment. We also want to make those considerations in visual forms of communications, whether that be picture symbols or print, we have to make sure those are accessible to our students. The photograph on the right is a picture of one of my VI students who was in a juicing activity. In order for him to have access to his teachers forms, she’s standing right behind him, kind of over him and Chris will talk about this more in depth, she is providing constant contact and he is in contact with her hands, so he knows what topic she is referring to based on what she is touching and in contact with.

We also want to make sure students have access to quality social interactions. This can be tricky for students who are totally blind or have really distorted visual senses. One of the biggies is even just locating a partner. One of my pet peeves is when students have greetings loaded on aug-com devices and they rely so heavily on another person to que them or prompt them to say “hello to so and so,” we need to make sure part of our greeting routine is actually locating a partner in an accessible manner for that student. Whether it be checking out their name identifier or their name symbol or making direct physical contact before they then initiate a greeting using an alternative system. A lot of times it is hard for our students to identify turns in an exchange, if they hear a long pause do they know that means it is their turn. And they can miss that because usually turns are indicated by something like eye contact or even just a body turn that suggests that person’s turn in a conversation. This goes along with access to the partner’s attention or what their communication attention is. Lots of nonverbal forms of communication like facial expressions and eye gaze communicates so much that we take for granted and is not accessible to our students. The photograph in this slide shows my student having access to his tablemates, he has that accessibility, he has a tactile map placed in front of him to show where each of his classmates are located in reference to him. He is able to take role and identify who is present and who is not present using that alternative light-tech system.

Finally, one of the additional rights we want to consider for our VI communicators is to make sure they have accessible auditory and tactile representations. I won’t go too far in depth to that because Chris really covered this so specifically and nicely in our first session and making sure those auditory and tactile adaptations are made so that those symbols are well understood. I do want to take this a step further in our implementation phase of the webinar today and talk about making sure that our students have direct instruction, direct input to using these new or add-on systems to their existing systems in order to learn new and quality communication skills, both to receive communication and to send it. Again, this will be the premise of the rest of the webinar today. I'm going to go ahead and hand this over to Chris who’s going to talk about quality access from a TVI perspective.

[Chris Russell] Thank you so much, Megan. I would say also that communication Bill of Rights as a practical measure and as a way of generally getting your teams on board and thinking about these philosophical issues, I would suggest printing that out as a poster format using that link and just putting it up in your classroom and having something your team can refer to and then can build specific goals around making sure you are providing that absolute human rights access. One of those important parts about access is the placement of the system. That refers especially to aided systems to all those aided devices you’re using but it also applies to promoting access to the placement of unaided systems as well. In the context of the aided systems whether they be 4-cell, 8-cell, 2-cell devices or something as complex as Dina box or an iPad, one of the most important things to consider is where is that aided system kept. As you know working with the students, we often deal with the situation where the aided system can't go home with the student for a variety of reasons. If you can't go home with the student where is it being kept and who is getting that device for the student at the beginning of the day and who is making sure it is staying with the student during the day and I think the answer to that question is should be to the extent possible the student, himself or herself. So that system needs to be kept in a consistent place and a place the student can know how to access it, whether it is with some assistance or in a guided manner depending on the level of prompting needed and the level of support that’s needed. The system has to be kept within reach. Here we have on the right a great example if you're using tangible symbols, we spoke at some length about tangible symbols on part one about design and selecting a system, but if you're tangible systems are displayed in that kind of arrangement in a vertical arrangement, some of the symbols at the top might not be accessible to the student at all, so for the student to select a symbol to communicate something or to make a transition or anticipate a next activity, some of the things might be beyond the reach of the student, some of those considerations about keeping a system within reach, in keeping it consistent and keeping it accessible within that visual field, whether it is kept in the student’s locker or on a shelf or in the student’s bag, and there are specific considerations as to how to access the system that is portable. If something is portable it is accessible at any given time so some suggestions we will provide for you here, but something to just generally consider, is that access providing access based on placement, is it dependent on the specific system. Some things are easier to carry with us and some things are more difficult to make sure they stay with the student.

Some suggestions for adapting placement for students specifically with visual impairment and additional disabilities, is choosing a meaningful placement and what does it mean for placement to be meaningful for a student. It could be that device is kept in the student’s personal space such as a locker. It might be depending on the system you're using, depending on the mode that you’re using, such as a tangible queue , a tangible symbol, is it kept in the location where the activity takes place and it’s just going to be there waiting for the student? Again we are talking about multimodal systems. So we’re talking about students using or who could and should be using multiple forms of communication ranging from those more abstract and complex aided devices down to less abstract and more concrete forms of communication. Another way to adapt placement is to label, whether it is a tactile or visual label. In part one of this webinar series we spoke at some length about visual and tactile adaptations for designing AAC and these same considerations can apply to studies. Those are things like contrast, size, and distance, etc.. One way to make an AAC system more portable is to create something else that can help carry that system. Whether it is an apron in which you can keep tangible symbols or even keep a small device or an iPad. If the student is in a wheelchair making sure you have that mount on the wheelchair to carry the device around with them so the student can keep the device with them, keep the aided system with them but can also be using their hands, using their bodies, using their other forms of access at the same time that system is still available to them. Pouches is another example of that, as well as Velcro is of course any educators best friend. Using a special shelf or box to hold object symbols. Here we see on the wall a special part of the wall has actually been adapted with a black Velcro, it’s the top photo on the right and the black felt to store the entire array of tangible symbols. Down in the bottom right we have labeled locker boxes, labeled locker sections with a tangible symbol that represents each of those students. That would include your students, labeling all of lockers so it’s not just the one for the students with a visual impairment but that student with the visual impairment can go along and feel the different locker spaces to identify other students.

I want to talk now about some different presentation interaction strategies for implementation of AAC. I want to mention briefly that we are not talking at great length today about implementing specifically symbol systems or calendar boxes, etc I think that is too big a topic and the subject of another webinar, but at the end of this webinar you will find resources and there are some terrific articles including two in particular I set aside, one is, *Let me Check my Calendar* by [Indiscernible] and *Getting Started with Object Communication*. I would suggest looking at those in terms of specific recommendations for those.

In part one we spoke about all of those individual characteristics that are factors for designing and selecting an AAC system. Today we are focusing on that yellow part of that beautiful Mirenda quote we have here, we’re focusing on developing the actual environments in which the student is likely to interact. That involves specific adaptations to the actual setting or environment but environment really is a big part of the communication/partner end. Who is the student interacting with and in what types of routines are they interacting. Those are the specific adaptations were talking about today for implementation. Environments that community -- encourage communication that are consistent, predictable, and motivating to the student and our child and student centered and based on student's preferences and things they want to interact about and things relevant to them and their life. They take place within routines that allow for anticipation that are consistent and predictable and routines allow for practice and multiple opportunities to practice those skills. They are routines that allow for success in providing an opportunity to succeed in communicative interactions is one of the most important factors for making sure the student is going to continue to do them and use the modes you are teaching and providing. Don't forget to make sure you are providing and developing routines that are fun for the students and provide opportunities for social exchanges because that is a huge part of what communication is. Communication partners themselves beyond the environments in which they exist, communication partners themselves must be available. They have to be physically available or visually available or tactilely available depending on the student's level of sensory access. A student with a restricted visual field in order to access sign language, that sign language has to be presented within that field in seems relatively common sense but the same goes for any other mode of communication. The mode has to be accessible in terms of actual proximity and the communication partner or the teacher, whoever it is, needs to be there so it seems relatively obvious but it does involve into learning specific strategies for providing that proximity including constant contact and constantly having a student who is blind or visually impaired or who has multiple disabilities, especially if they have an additional hearing loss. It means providing constant physical contact so the student knows you’re still there. They should be in an unobtrusive way whether it is a light touch on the shoulder or touching your leg to the students leg, or your knee to the student’s knee, whether you are sitting next to or cross of them. Keeping the student informed that you are still there. Touch cues which we will get into but that is the topic of a much longer webinar. Using specific very concrete forms of touch that have a specific meaning to communicate specific things to the student, it is part of being available. Communication partners must be observant and must be paying attention. Observant means a whole different thing when talking about students with multiple disabilities including visual impairments. If you are not paying close attention you might miss some of those more subtle or less conventional forms of communication that the student is initiating. You might miss the subtle response or motor response or a movement or a look that needs to be responded to in order for you to be providing a consistent environment and encouraging communication. Communication partners most of all need to be responsive. Responsiveness is the ability to recognize the unconventional form of communication the student is using or to recognize whatever the attempt at communicating is, communicative initiation of a student. To then interpret the meaning of that communication that the student has initiated, and then to respond appropriately to that initiation or response. Responding appropriately is the big topic of the strategies that actually qualify as responding appropriately. That means using shared forms of communication. It means using forms of communication accessible to the student. It means using nonintrusive hand use and interaction. With students with visual impairments and additional disabilities including deaf blindness as communication partners we have to be in close tactile contact with that student. In order for the tactile contact to be respectful but encouraging of communication and developing relationships. We have to think about how we use our hands and specifically how we are touching students to facilitate communication development. We have to plan what type of prompting we are going to use and what level of prompting should we use and we have to be deliberate just like we were in designing AAC systems for students. We have to be deliberate about our choices. We have to have meaning behind what we are doing. Bruce’s study in 2003, which you can see there, found what she called a severe mismatch between the forms used by students and the forms used by communication partners so we have to think about how the student is communicating with us and are we responding to them using the same mode or different mode or the same level of communication or are we using something that is far more abstract and not accessible to the student.

That brings us to using multiple modes, that’s our reminder again, something we have been talking about throughout this webinar series. Remember that an aided device doesn’t mean you should put aside all of the unaided or more concrete forms of communication. We’re talking about combining technology with unaided communication responses to rally have a true impact on communication development for student. In the picture you can see a student using a voice output device, a one-cell voice output device to request something and at the same time the teacher is working hand-under-hand with the student to instruct in a nonintrusive way so that is combined with the use of that technology.

Children with visual impairments and additional disabilities who have combined vision and hearing loss lack access to incidental learning. Incidental learning is all of the concept development that we experience which is a huge amount of our concept development that we have gained through exposure and experience alone. Just through what we take into our eyes and ears. Here on the left you can see children with typical sensory access to development. The overwhelming majority of that concept development is too incidental learning, a big bottom part of that triangle on the left, about 87%. Secondary learning, somebody explained something to you in addition to you observing it happen. That makes up about another 10%. Direct instruction, someone literally took your hand and showed you something, the shape of something the shape of an object to explain what it was. It makes up the tiny top of the pyramid. For children who are congenitally deaf blind or have visual impairments and additional disabilities, direct instruction makes up the overwhelming percentage of concept development because they don't have access due to their sensory deficits, they don’t have access to incidental learning. That means that is a great need for direct instruction. Direct instruction has to be meaningful. Building correspondence between AAC forms and the messages they represent within interactions is a balancing act. We can't do everything at once. We can’t have our hands on everything at once. It has to be deliberate what route we take so it does involve some direct instruction, directly explaining and showing something to a student which can be facilitated through constant contact and using multiple modes of communication with a student. The great question Megan posed is what are the student’s hands actually on during any given interaction. A great example is in circle time which is a very, very social routine, a great opportunity for your student to interact with his or her peers. Is your student just touching a voice output device in order to say good morning or they actually interacting with that wonderful social opportunity. Your student’s hands can't be on everything but how can you make sure the student has access in addition to learning how to use the device and say good morning? How can you facilitate to the actual routine, the activity or topic of conversation, or an actual partner?

Part of that involves hand use. It involves tactilely providing access. We advocate for using hand under hand assistance, hand under hand strategies as opposed to hand over hand. Hand under hand interactions are noncontrolling, they involve a shared experience as opposed to manipulation in doing for a student as opposed to doing with them. They offer opportunities for facilitating without obstructing the student’s tactile access to what they are touching, what they are learning about. And it actually encourages the student to develop those tactile exploratory skills that learning is so based upon.

In terms of hand use and how it applies to AAC, you might be using your hands to facilitate the student’s hand skills and development of using their own hands in an increasingly exploratory and complex way to get information. By actually exploring and accessing the mode itself, whether it is and aided system or all the aspects of and aided device, or having complete tactile access to any particular interaction as part of that communication turn. It might involve modeling and teaching the use of the system, showing the student in using the hand under hand approach as you showed there were something is on a device or as you give them exposure to different modes. It involves engaging it can be used in terms of engaging and sustaining a conversation. Using your hands to provide tactile confirmation including touch cues which are specific touches that have very specific meaning based on where they are on the body. For example, we have a touch under the elbow that might mean we are going to stand up whereas a light touch right here might just signify availability, that you are there. The constant contact we spoke about before. Also using your hands to facilitate the student to use their hands to access the actual activity, whether it is a circle time activity and going around and saying good morning to people by touching them on the shoulder or the arm or someplace that is not intrusive.

Consider for students with visual impairment and multiple disabilities the need that they have for wait time and processing time. This wonderful quote, from Belote, “One or two minutes sounds like a relatively short period of time, but when you're waiting for a child to act on a request, it can seem like an eternity.” I like to say it's not possible to train people to be patient. It's not possible to train people to be compassionate for caring but you can train people to count to 10 before they make the next prompt or take the next communicative turn with the student. Sometimes that is enough to solicit communication.

In thinking about processing time and AAC, what are you waiting for? Are you waiting for the student to initiate? Are you waiting for the student to send the initial message? Or are you waiting for them to respond and receive? Is there a difference in the wait time for each of those things? That is something to consider. Consider also, are you waiting for motor response, for a student to touch something or to move something physically, or are you waiting for them to cognitively process what you asked them, or what is going on around them, and what they might want to communicate about. How much time should you wait? Parker and Johnson in their study on wait time for students with deaf blindness, identified waiting is very individualized, but waiting at least five seconds, or between 5-10 seconds between communicative turns, waiting for a student to respond or initiate, it does have a net positive effect across the board. Providing that extra wait time does have a positive impact on communication development. It depends on the pace of the interaction. There might be different wait times for different modes of AAC it depends on the familiarity the student has with the activity and the routine. In a more familiar routine a student might need less processing or wait time. Look at those things and measure them and provide some constant contact. As you can see in the picture on the top right, a teacher hanging their waiting for student to interact, she is just offering her hand in a way that is a break between that communicative turn and the student has the ability and the student more than anything is not restricted to making that next turn, that is a tactile signer. Wait time might change depending on the students level of fatigue, stress and general arousal level, their availability for learning and how they feel at any given time, so consider that as well.

Modeling is an important part of teaching AAC. Modeling can be tactile modeling or visual modeling, it can be showing something to a student. Obviously in a way that is visually accessible for them. It can be auditory or it can be a combination of the any three modes of sensory access. As a TVI, it's important to get that information from the TVI you work with or if you are one yourself from a learning media assessment, where is the information going to be accessible to a student? Modeling is important to supplement communication routines in the sense that you’re modeling topics of reference. You are showing students those extra things that open up communicative interaction. You can model a specific device, an aided system. You can model the navigation of the device and you yourself can model walking through using that device to communicate. That is a form of teaching how to use the device. You can also model the secondary modes and those additional modes beyond the primary AAC mode. Modeling social routines and responses and giving those opportunities. Megan will have some wonderful examples of these types of things within natural routines for you.

Partner assisted scanning is a strategy that involves pointing at, showing, or speaking messages that a student will select. That is for a student who was not rhetorically pressing that button. As you can see on the picture on the right, you are pointing to or showing them possibilities and you are waiting for a response, whether it be eye gaze or motor response, moving towards the right or towards the left. You can see in the photo an example Megan provided of using an adapting partner assisted scanning mode using an iPad to a student who has CVI, you are highlighting that message that you are asking the message, is this the one you want to pick with the color accessible to the student too. Partner assisted scanning can serve a variety of benefits and functions facilitating the use of the current receptive vocabulary, teaching new symbols and words, developing visual skills such as tracking and fixing and shift of gaze. Pairing with other modes of communication, and it can be used across multiple forms and is by nature an expansive strategy. Partner assisted scanning and the success of that system is reliant upon a responsive communication partner who is observing and interpreting and responsive to the students communicative turn.

Think about the level of prompt you were using with your student. Guiding participation by nature allows for shared experience in a natural conversation form but also allows opportunities for teaching. Within that guided participation, how can you identify, what is the level to which you should be prompting your student to support their success and to support their increased independence. Not shooting too high and not shooting too low, that’s starting where the student is and the ZPD, the zonal proximal development and what a learner can do with and without help.

Here is a visual for you in terms of thinking about prompt hierarchy and what are the different levels of prompting from least obtrusive to the most obtrusive. You can take a look at that later, but you want to be using that least intrusive prompt first.

Here's an example I will ask you to look later about prompt levels across the day. This is just the first activity of the day, the morning circle, before that even arrival, but morning circle. What is the standard routine on the left that the class is doing. Were the individual steps the student is doing and what level of prompts in terms of going from least intrusive to the most intrusive are you going to use to promote the students communication? I would recommend using that kind of tool and that kind of planning to structure the entire day for the student and how they are going to be using their AAC modes.

This is something for reference, Dr. Roman's work on CVI and CVI characteristics. Think about for students with CVI, how do each of those characteristics impact presentation and implementation of AAC. I'm going to ask you to look at that again later and at this point thisI’m going to shift over to Megan.

[Megan Morgan] Thank you, Chris. I'm going to go over functional implementation. Let's figure out how to get the devices that we have at our student's hands and modeling and teaching our students to use them at their highest level of independence. Our overall goal of communication intervention is for students to increase their level of communication but also the number of reasons they communicate and the functions of communication. How efficient they are in the rate of accessing a communication message. Can we decrease that access rate? Can we make it faster and easier? Can we have our students communicate across a number of different routines and contexts and are we keeping them in the same context specific communication routine. Can students communicate with the number of different partners? I'm not going to go into too much depth with these because it is all embedded within the following strategies.

One of the reasons our students need access to alternative forms in the first place is that when we take a step back, we notice the types of exchanges nonverbal students are involved in, they are often in that respondent role. They do not initiate communication at very high levels or increased rates. The other thing we notice is nonverbal students have very unequal turn taking patterns with the verbal partner taking the majority of the turns.

One of the other challenges we face especially if you're in a self-contained teacher or work in a self-contained classroom, you know that instructional time very frequently lost to other activities, whether it is repairing technology, transitioning between rooms or parts of your school, toileting, eating, attending therapies, all of those things take up time. We find we are quite limited in the time we have to teach a whole new system of communication if that is the case.

I want to talk about one of the great ways to initiate communication with another student. I picked these strategies based on what my students with visual impairments and additional disabilities like the most. They really have chosen these next few slides out for you, it’s not Megan’s picks. One of the ways my students like to initiate communication is with tangible forms, whole objects because that is literally hands-on. In the photograph on the bottom, this is during morning circle time and the student is wearing a really cool bracelet with lots of things on it. The student next to him, he didn't have to extend his arm, the student noticed it. Without even realizing it the student on the left of the picture with a bracelet has just initiated a communication exchange. This is a great opportunity to start to implement some things like attention getters or greetings and pair that with extending the bracelet out and see what that might look like in the form of maybe a voice output device. You can record a single message like, check out my bracelet, and maybe pair that with a touch prompt to extend it for that person. A natural response also follows, it’s very easy for a person to say, “oh my gosh, that is the coolest bracelet I have ever seen,” even if it appears nonverbal. Our students would know the initiated that interaction and the know other person received it because they are touching that bracelet.

You might want to expand the interaction to have students take multiple turns. In that case you can load recorded messages onto a step-by-step sequencing device. If the student is a tactile learner you can put a piece of the bracelet as a symbol on the outside of the red button on the right. Then the interaction might sound like, “ hey there” and the partner’s response would be , “hello,” and then, “did you see my bracelet?” and it is extended out and then the other person might say I see your bracelet. It makes a cool sound when I shake my arm. And the student rattles it and so on. You can see it is more of a scripted exchange but it elicits a natural partner response.

One of the ways my students love to share their experiences is through experience books. Many of you have heard of the concept of experience books, there is so many wonderful articles and resources on how to make them with students. In the photograph on the left my students participated in an activity about juicing vegetables and fruits and what are some ways to make that experience permanent to share with another person, maybe their parents or another staff member, maybe someone at lunchtime. It is a motivating experience for our students but motivating for different reasons for different students. For one of my students he liked the auditory aspect of the juicing experience. For another, they liked the taste aspect of the experience. On the picture at the bottom you can see some print written under some braille scribbling but there is a paper plate with several partial objects glued onto it. This is a light text form or manner in which the students can use the plate in their hands and fingers and grasp it and there are instructions that instruct the responsive partner that when the student touches that object this is what you do with your voice. The student might turn to a different part and there are instructions for what the student might do with their voice. There is an apple stem glued onto that paper plate. When the student’s fingers get to the apple stem, the partner reads the paper that says, you like puling and twisting the apple stem, it sounded like this, “pop!” You liked opening a bag of carrots and pulling one out and the bag sounded like this. When our student learned it wasn't the person present for the experience understood what he liked about it when it was something five hours later, that understood he loved those sounds and all that input. He shared it multiple times with multiple people. And then we really met our goal of having him expand the number of communication partners he could share with and interact with in a simple light tech way of collected materials from the experience. There is also some iPad apps out there, whether it’s Pictello or Sounding Board. There’s training on YouTube videos or training online and how to use those to set up experience stories if you're student has the sensory skills to access those forms of communication.

My students love shared reading time but they don't like it for the conventional reasons you and I like shared reading. A common way for our students to access literacy especially if it is read aloud literacy and they want to share in it, is to load a repeated line of the story or a poem onto a single message device and then the person can obviously pause and see what level of prompting the student needs to read aloud that part of the story. If it's in a lot of nice practice as long as it is a story this student likes and that they want to participate in. It is never a good thing to force a student to read a story they are not that into or pull meaning from. I want to make sure if we are loading a repeated line of a story that the story it is a preferred story or piece of literature. A lot of my students love sound effects, they are so into them with their auditory sense. A lot of times if there is part of the story that does have a sound effect like a splash or a zing, they can participate in the story at a great turn taking level when there are different pauses or cues to insert the sound effect for them to read aloud. A lot of times my students like to request the reader, whoever is reading the story, whether it’s the teacher, the paraprofessional, or intervener, whether it’s me to change their voice or their reading style so they might have a sequencing device with a book reading symbol on it or whatever it may be, and as I'm reading it they might say, “Megan, can you read it with the scary voice” They think it is funny to have that control and power over the readers voice during the read aloud. I would highly recommend inviting guest readers especially if one of your targets is to expand the communication partners. Invite the president of the United States if you want. If you don’t want to aim that high, invite other staff. Custodians, the building secretary, other teachers and students in the school to come and read a story and see if they can respond to changing their voices and read as well as you can do it.

My students love poems and chants. All of us would were first learning how to read, early childhood programs focused on poetry and chants in order to learn. How to read, how to listen, how to participate, how to engage. This is a great way for our students to bring AAC systems into a nice level of participation with a whole group of students. You can put the tune of Frère Jacques to anything. We've used it to talk about our scheduled activities. [Sings example of Frère Jacques with scheduled day activity] You can use it for anything. I have at the bottom bullet if you have older age students at early communication levels I've had a lot of success with using the tunes of oldies songs. You don't want to use preschool or early childhood songs with the older, seventeen year old student. Think about listening to an oldies station and see if a song would make a good schedule tune with an older student who still needs access to early communication forms.

You can use chants, you can use the Going on a Bear Hunt chant, but again, you can use just about anything. Most of the students have no idea or experience level with a bear hunt. Rapping songs often have great rhythms and tunes. Attach these songs and rhythms to the language you want to use for whatever activity. Whether it is cooking or the calendar schedule or traveling down the hallway and making and greeting. If it is attached to music our students remember it and they can anticipate when it's their turn to activate the device and interact with someone else. It's nice when you can embed vocabulary or concept within motivating and repetitive interactions of classmates. One of the ways I do this is if we load sequencing devices and we play a game called opposites and there is a symbol for opposites on the sequencing device. Some of the devices have a randomizing function so it doesn’t go in the same order every time like other sequencing devices and it mixes it up for you. Every time the student activates during the game of opposites, they will throw out a word like hot and the rest of the students get to respond cold. And then the student activates it again, and it says, bad, and the rest of the students respond, good. This was a fun game at the elementary level. At the high school level, we did not call the game opposites, we called it argue. And this was a setting in which it was okay to argue with the device user who would initiate the word and then they would argue with the opposite word. And turns out to be lots of fun and laughs for our students.

We can use phrases of rejection, there’s multiple messages that all fit into that communication function. Whether it is no way or I don't think so. You want to invite the other student that is verbal to initiate a game of 20 questions. They love making out absurdities because they know no matter what question they ask the student that is the device user is going to respond with a no, so they make up all sorts of hilarious things. That is a great way to build their engagement and participation and the fun. These games and group activity interactions most importantly should be fun. What ends up happening is the student rises to an equal level of participation as his same age verbal peers, not only in an equal pattern, but also initiating which was one of the challenges we face oftentimes.

If your students have calendar systems in place already you can integrate a voice output device with the calendar system and the student can be the morning announcer for calendar time. The device might be loaded with something like and then or next in the students track along their tactile symbol calendar to announce PE or lunch. You can integrate and combined the systems, remember multiple modes and multiple systems. As long as they are routine specific we can model and teach students to combine these systems and have quality access to be an announcer for their class during calendar time. A lot of times I like to use action vocabulary. A lot of systems are loaded with messages that perform requests. We like to get away from that and load different functions and different vocabulary to work with those functions. One of those things is to load action vocabulary or verbs. This is great for students when they have auditory access to the other side of what they have just told us to do. So you might say can you whisper the schedule today? Can you hum the schedule or clap out the syllables to the schedule words. That control and power they have over directing your actions is very motivating.

Play with voice output, it’s fun. Chris mentioned allowing students to explore the device. When we first discovered our voices developing speech and language, we really discovered our voices. We probably drove our parents or caregivers nuts, but load babbling onto the device. There’s nothing wrong with loading a device with babbling [example of babbling sounds made]. It might drive you nuts but it is a normal part of speech development and language development. Feel free to play with your voice output devices. Use sound effects as much as you can. Our physical therapist the other day was working on a fake swimming move to work on alternating motions with the student on the mat on their stomach and the student wasn’t into that getting the physical task done big switch just out of his reach and it makes a big splashing sound, that will motivate him to find a switch and hit splash. And then again to alternate and then hit splash. It's a fun way to incorporate silly sound effects into functional routines that are already in place and build that motivational piece. I'm going to turn it back over to Chris he’s going to wrap it up and talk about ‘Now that we have these systems in place, and we have implemented the systems and observed have the students interact with them and sets them up for success, what we can do to continue to assess the students.”

[Chris Russell] Thank you, Megan. I'm going to talk briefly about ongoing assessments. It is important to remember that you constantly have to be updating our plan and possibly updating your system and your actual AAC modes that you’re teaching and providing the students with. Ongoing assessment is not the same as starting over. You are picking up where you left off and making alterations and edits. There’s a great quote by Duvalla, “It is a matter of keeping decision guiding information accurate, up-to-date, and clearly inclusive of the shared knowledge of all involved.” Some recommendations for ways of assessing the system you are using and what way does it specifically need to be updated is pick some actual assessment tools. The communication matrix is a great tool and the resource link to the communications matrix website, and the community of practice is in our resources, is great tool for assessing expressive levels of communication, going from pre- intentional all the way up to language. Megan mentioned earlier the general goals of communication intervention and development as fitting into five or so categories. The levels of communication that are being used, as well as the function of communication, increasing the rate of communication. The number of different routines increasing and the number of communication partners is increasing. You can assess any of those things fairly simply. You can do a rate assessment. A rate assessment of intention of intentional communication acts so you were literally checking down and making tallies for how many times the student communicated intentionally in a given minute, in a given activity, and that is something you are focusing on increasing. You might be shifting the focus and the specific tools you are using to reflect the student’s progress.

In addition you can assess your own implementation effectiveness and the level to which you are succeeding and providing access and meeting all of those guidelines that are laid out in the communication Bill of Rights. A great tool for self-assessment and how good a job I am doing in implementing a aug-com system and providing access is the classroom observation instrument which is designed for students with combined vision and hearing loss or visual impairments and additional it disabilities. These are just a few selections from the classroom observation instrument which is accessible at the link below to the National Center on Deaf blindness. You are looking at to what extent you are providing actual access to communication. This is achieved, nearly achieved, making progress, nonexistent, not applicable, to what extent you are providing access. This can be done as a team. I think it should be done as a team so everyone can have their input on how good a job we are doing, or how we can improve and update. You are assessing your role in providing a range and balance of communicative functions in the way you were modeling, instructing, and offering opportunities for communication. Then you are looking generally at how you were using assistive technology to maintain and improve student’s communication skills. These are essentially rubrics for self-reflection but a rallygreat tool upon which to focus a collaborative team conversation.

Those are some just basic suggestions. There is not enough time to get into the full array but I would recommend taking a look at that tool. As a wrap up, hopefully in the course of this webinar and this series of webinars, you have had a chance to expand upon your thinking and learn some new strategies or at least have that wonderful self-reminder and refreshment that really is the reason for ongoing professional development. In these areas in thinking about collaborative roles and best practices and collaborative teaming specific to AAC design in part 1 and implementation in part 2. Communication rights, as Megan spoke about, the communication Bill of Rights. Take a look at it and print it out and post it in your classroom, do some self-assessment in making sure that those things happen. Characteristics of effective communication partners and environments, I spoke about, and response to strategies. Megan's ideas touching the surface of the incredible possibilities you can be implementing across your teams environments throughout the day. Some of those quick examples of assessing your progress and making sure you are assessing the system as well as yourself and your implementation as an individual and as a team.

We have a variety of resources for you. I would encourage you to download this presentation as a PDF and you can access those links. All categorized for you.

At that point I'd like to turn it over to any questions you might have.

I suppose you can type your question into the chat if you have one.

[Robin Sitten] Yes, in this Q&A box on the front. We have earned a little bit over time but there are still some people with us so we want to open the floor for questions if you want. While we're waiting, I will make a couple of observations on my own. I really appreciate both of you addressing students who are early communicators, communicating with their peers who may be more advanced than they are or who may be verbal because I do think that is something we can forget about working so hard one-on-one with the student to first of all communicate at a kid level. You always hear the stories of kids who kind of get taught, “ Hello my name is Michael, how are you today?” and they say that to another five -year-old and that sort of falls flat.

All of those examples about playing with voices and with slang and generating conversation with a peer who may be more verbal than you or just more advanced in their receiving or delivering communication. I think about an observation I had in the classroom were all the kids had different disabilities but they were all academically on grade level and there was one girl who used a speech board and how patient her fellow seventh graders were waiting for her to participate in the conversation. There was no huffing and puffing or rolling of eyes. There was simply waiting for her to type out her answer and press play and everyone would respond. I was really impressed with that relationship that they had.

Here is a question from Laurie: What suggestions do you have for adapting systems for students with little or no voluntary movement as well as vision loss which we kind of concentrated on today, but where kids don't really have that voluntary control?

[Megan Mogan] We did discuss a lot of adaptations in part one, one of which is the process of scanning, whether that be through switch scanning, even if a student slight voluntary movement with the head, they can switch scan through a number of message options. There is so much technology out these days that can detect our eye gaze and connect with our student’s eyes as they scan, if that’s an option. It is obviously dependent on a really thorough assessment of the student’s skills by someone like an occupational therapist or physical therapist. For students that decreased voluntary movement scanning is often an access point for them to access their device but I would also keep in consideration with those global types of involvement to make sure to pinpoint what kind of communicator the student is, if they’re a sensory motor type of learner, if they are more of an emerging communicator, that we make sure the type of messages they would want to communicate match their level of understanding and meaning. I don't if Chris has anything to add to that.

[Chris Russell] I think what Megan said as well as to piggyback on that, I think for students who have little to no voluntary movement, as to any student, you have to be figuring out where and how are they communicating and what they do have control over and what types of environments they have control over. It goes back to just thinking a little further back in terms of what is the intentional of communicative mode the student is using already and how can you adapt that? Even if it is just a change in respiration, that is communicating something to you. Going back to supporting pre- intentional communicators, how can you support them to get to the next level of communication and it has to do with meeting them right where they are and being highly creative in terms of how you adapt to that. I think the biggest challenge for people and the biggest step the educational teams have to take to support communication for students who don't have a lot of muscular control is being highly observant. As I was talking about what constitutes a supportive communication partner for a student who really has emerging level of communication might be pre-symbolic or intentional and is about observing those subtle behaviors that might be communicating something. Sometimes it is just a matter of paying close attention that you might find the student doesn't appear to have any gross motor control, but might be able to move their neck a little bit and that is he decide that student is eligible for a head switch or might be able to shift their eyes a little bit then they might be eligible for a scanning system. They might be able to move a little finger and then you adapt to that. I hope that answers your question, but I think it's more of a way of thinking and a way of assessing the extremely subtle aspects of the students abilities and looking for what the student is able to do and that is where you have to start.

[Robin Sitten] And I think referring back to part one as well, and you will be up to download this presentation and the presentation for part one from her website where some of those examples, particularly had switching, those are both great examples of finding what motor control the student does have and they can use that to communicate.

We are really overtime now so I'm going to put an end to questions that as many of you know, you can always reach us through perkinselearning.org or you can comment on the webpage. This recording will be on our website tomorrow and those of you who had registered in advance will receive a follow-up note with a link to that recording and to the downloaded files of this presentation and a few other handouts. There are a number of pages, probably three or four pages after this slide of resources and references. If you want to run through those when you download then you will be able to read them easily but there is tons of stuff there.

Would we make the word version of this we take the background out for people who are printing so it doesn't eat up your toner. Let me thank you both, Megan and Chris for this part and for part one. It is a way such a pleasure to work with you both and a heavy together on screen is really a nice pleasure. I will let everybody know we have got a prerecorded series coming up in October and you will get information about that from us in a couple of weeks. It will be pre-recorded but we will be asking for questions in advance. On behalf of the Perkins elearning team, myself, Dr. Mary Zatta, and Phuong Nguyen, thank you for coming and welcome back to school. Take care everybody.

[Event Concluded]