

Cognitive Aids in the Workplace
Time management and learning new tasks
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MODERATOR: It is 1:58 and we will get started here in about two minutes.

We are right at 2 o'clock. Ben, when you are ready, I can start recording and we can make sure we get captions put back into chat.

BEN SATTERFIELD: I'm ready.

TORI HUGHES: Good afternoon thank you for joining us today as part of our work access webinar. Today we will be covering cognitive aids. My name is Tori Hughes and I'm Tools for Life. We are so excited to have you guys here today, just a couple of housekeeping reminders you do not have microphone rights, we only have microphone rights for presenters, if you have any questions please feel free to put in chat box. Little purple tab in right hand corner of screen and you can type questions and comments there. We do have caption available through Stream text, you can pull up another browser window, move and resize to fit your screen. It has been added to chat. You should be able to click on that and go to Streamtext viewer.

>> This webinar is available for credit. If you are in need of CEU's or CRC's, you can send e-mail over to training Tools for Life training team and we will be happy to help you with that. It will be added to our chat shortly as well.

BEN SATTERFIELD: Good afternoon everybody, I want to welcome you to this particular session Cognitive Aids in the Work Place, time management and learning new tasks. We will be looking at how we can accommodate in work place. Again, my name is Ben Satterfield part of research team at CIDI here at Georgia Tech. Please don't hold that against me. I have honor of teaching graduate level speech pathologist. What we want to try to accomplish today is identify some challenges that are out there for individuals with development disabilities in terms of obtaining employment. We would also like you to come away with ideas of how assistive technology can support individuals in workplace. And also what you can apply in your work setting. As Tori said, we welcome questions as we go along, if you have any type in chat box and Tori will interrupt us appropriately.

>> This project is called Work Access and it is part of operations of CIDI or CIDI formerly known as AMAC. We do a lot of different things here accessibility consulting, user experience ITC types of things. We have braille services and captioning, describes audio, e-text production lab and factually basically at our office where we take textbooks and turn into electronic for students in university system in state of Georgia.

We are interested in doing accessibility in way that helps transform the work of state agencies and individual companies as well as making life and learning more effective and easier for individuals with disabilities.

>> So, just for sake of having some common ground, let's talk about what assistive technology really is. It is defined in federal law, says it is any item or piece of equipment that's used to increase, maintain or improve the functional capabilities of any individual with disability in all aspects of life, from low tech to high-tech and includes services as well. Just to think about what we are going to be talking about today bear in mind, assistive technology can be tools we get off shelf like Best Buy, consumer electronic store or custom decides and made for one individual, also includes strategy that make it work for that individual.

>> Let's think about these things that is called in some places assistive technology for cognition. Keep in mind as we look at things we are going to be talking about today we are going to be focused on individuals with intellectual disabilities. It might be a good place to start with what we know about these individuals. As you know a lot of these individuals have a lot of their needs addressed until age 22, by their 21st birthday they get dumped out in cruel world and if they had not planned for that transition it can be jarring. Many are unemployed and have limited resources and are on waiting list to receive medicaid waver funding, that's what is typically required to live independently and more many transportation to work is going to be tied up in having those extra resources. So essentially individuals in this group are kind of stuck sitting at home. Parents typically serve as unpaid caregivers and often are unactive and can aggregate existing health challenges they face and isolation they are going through can really take a toll. This is group we are going to be talking about today.

>> As far as employment, about a million people with disabilities lost their jobs last year between March and August, that was devastating effect on economy, but particular impact on individuals with developmental disability, naturally employment is very low, it is about 19% and much lower than people with all disability. For folks with intellectually only [Inaudible] participate in work group, it is particularly small number. We find that not many of these individuals are working full time, we find these numbers are reflected here in State of Georgia I think our employment numbers are a little behind national. As you can see, it is discouraging picture that we see. Bottom line overwhelming majority live below poverty line, that is in stark contrast to the picture that we get when we observe employment experiences of these individuals. Research tells us there's strong public support for businesses that employee these individuals and employers have positive outcome.

I will share with you I worked with employer who hired individual with disability. We had a number of them. Many grew to love their jobs. They got involved with routine. It was specific expectation.

>> This team of individual we had to come in to work for us accomplished some very important task in production chain. We had some individuals we employed who were more typically abled. They could have done those jobs. This team that came in helped free those guys up to do other things. They back part and parcel of team and I think they, not only

did they enjoy their work there, we got a lot of having them alongside us. By having, tapping into their motivation by breaking task down and giving them opportunity to practice and repeat their task they became very successful. I think we will see that as formula that works well.

>> There's obstacles that remain to be addressed, some are societal. A lot of times just expectations of society in general or specifically in certain workplaces that foster job discrimination, individuals are not expected to work or given opportunities to show what they can do. There's other physical barriers like transportation and accommodation and assistive technology can all be hindrance to success. We still have a lot of work to do in terms of connecting these folks to their community and workplace.

>> One thing we discovered, there's growing body of research that is showing us that assistive technology in form of accommodations can help overcome some of these obstacles, and help enhance performance of some of these individuals who come into workplace and give team a chance to back away and have individuals work even more independently.

>> Issue is we got to be careful to consider needs of individual, there's no one size fits all to accommodation process. We have to take a look at how best to support each individual in workplace. That is where this Work ACCESS project comes in that we are talking about today.

>> I have a little video I would like to show you. Tori, if you want to pull that up while we are talking here. This was produced for us and gives a quick overview of how this project works. Tori, is your volume on?

TORI HUGHES: Yes, can you not hear it?

BEN SATTERFIELD: I'm afraid not. It was working before.

TORI HUGHES: Is that better?

BEN SATTERFIELD: No, it is not working.

TORI HUGHES: I forget to click share audio, that's my fault.

BEN SATTERFIELD: Thank you Tori.

Video

BEN SATTERFIELD: Thank you Tori. On our panel today Karen Milchus, who is Director of of this particular project, do you want to say anything about it to give folks a little more information about it.

KAREN MILCHUS: Sure, this is project we are working on to develop a tool that service providers, people with disability can use to figure out what kind of accommodations will work for them. We are expecting we are starting usability with tool late spring early summer. When we do launch it will be free to public in exchange for how to improve project while we are still developing tool.

As video mentioned we have different ways that we have been collecting this information, one is through crowd sourcing where we held interviews to get ideas from people who would be appropriate for different task, those are solutions we will be sharing with you. With that, I will turn back over to Ben.

BEN SATTERFIELD: Thank you, good stuff. Here is where we are with work accommodation system or Work ACCESS, as individual tells us a little about themselves and task in workplace and environment they are working in we can break down and look at task and you get suggestion back. Typically you get more than one so you can take a look at what

options are out there. This is where we are. We have done nine disabilities. Several that we learned from this group, in interest of time we will focus on three: Planning workday, staying on task and learning new task, that will be our focus for today's task. In terms of functional charges or limitations being examined here everybody is different. The neat thing about this population they are unique individuals, each one with own combination of skills challenge and gifts. Some of things we will be talking about will also be useful for other employees and other people who have their own challenges.

One of things that's neat about assistive technology and design that has gone into it is that we find that things created for people with disability often have much broader and universal appeal, curbs and captioning on screen that reads across, I was going to say gym, we probably haven't gone much. When you see those kind of supports or like on your cell phone, word completion tool. It began as tool for individuals who had difficulty using the keyboard and cut down on their key strokes to tools begin, or design begins in area of people with disability, but often it is so available it spreads that other people find it very valuable as well. Watch as we talk about some of these things and see how other employees can also benefit about some of other things we are talking about.

>> First, we will talk about aspect of planning workday. We will take a look at task, problems that were identified for us and specific approaches along with solutions and strategies. In planning workday task the problems that we identified or that were identified for us was remembering appointments or meetings, remembering work tasks that need to be completed, time management and accesses standard calendar.

Let's take a look at the first problem, employee has difficulty remembering appointments. There's several different ways in which we can address this. Typically electronic calendar or app, like Google Calendar would be great solution. We program in repetition of appointments, things happened on regular day. It is helpful to look for systems or alarms in a format that employee understands. Sometimes it can be print text, but needs to be color coded or perhaps [Inaudible] is available to prompt individual. There's computer and mobile device base option we will take a look at. Some will sync and update what employee will look at.

You also have to keep in mind that sometimes things introduced in workplace can be distraction. There can be books to carry around. Sometimes we can use clipboard like dry erase board set up like calendar, just so it is using format that employees can understand. So if individual needs large print or braille because of visual challenge, we would want to accommodate that as well. Sometimes we can even record our voice or have a system that will provide auditory guidance about what is coming up.

There's app called Endeavor that's affective with receiving voice input as well as voice output. Sometimes it is not as much cognition as processing verbal directions, but having a chance to repeat those messages can sometimes be a real asset.

>> Another approach would be to provide alerts in advance. Using electronic calendar and app that's something you can do to give us a little bit of head start, or early reminder that things are about to change or

we need to get ready to go to next task or break time is over and we need to get back to work.

We can set alarm or alert so it goes off before appointment to accommodate individual's need for transition. It is always a good idea to take some time and review appointment for next day and possibly for next week. We will talk about ways you can visualize that, having full picture of what day and week will be like is helpful to individual as long as it is not to overwhelming.

>> Another approach is to record work task as they are assigned with dates and times that they are due. We can use electronic to do list, so that we can see in time and space where these task need to take place. We can have supervisor help individual input these into their list minder app or their to do list, or their planner and sometimes you can even use paper and dry erase board, post it notes to be able to track these kind of things. We can also record work task -- another way to do, repeat list of task, if there's schedule that repeats itself, where we are doing same type of thing on regular basis, there's pattern, we can create personal schedule so it is personalized but have all things individual does on regular basis. That can be in electronic format, or you can print out laminate and have available for individual to be able to reference. Again, endeavor app is another way to present not only in visual form, but also with auditory support.

>> Some of our individuals we know have challenges with managing time. Time is difficult thing for some of our guys to get their mind around so to speak. So again, using electronic reminders for not only schedule appointment but unscheduled, like the to do tasks that you have to get to. Sometimes it is good idea to go ahead and put in schedule so individual makes time to do that thing whether it is inflexibility still needs to get done.

>> One of biggest issues that I think we often miss is fact that there are assignments that we give individuals that are really more complex than we realize they are. A lot of assigned tasks are sort of conglomeration of multiple things that have to be done. Some of individuals with multiple disabilities are going to have problem figuring out where to break it down. It really helps to break down complex assignment into sub part, if you will, smaller task. If we can put in framework do this, do this, and then third thing this brings them to conclusion of broader task they are able to accomplish more easily. Work will get done better and they already easier time, less frustration and easier to do task. Breaking down is subsequent part and key of what we are going to be looking at. So block, time out for visual schedule is great way to do it. Estimating how long it will take and blocking out so individual can see how long it will take. Setting alert to help them move to that task and when that task should have started by is great skill.

>> Planning is not skill that comes in box, and we are going to have to help individual to do it. That is probably true for a lot of our employees. Modelling this is great way to engage them in process and get their insight how to parse out work and develop independent in trying their hand. If we model it for them they can take in over time and do more of it themselves. Particularly task gets define and it is clear what needs to be

done. This is a piece they can take more responsibility more. Whether so, there's some tools that are really helpful, some are really low tech, you can take pretty much any weekly calendar, calendar week at glance view so hours are broken up, this is great way to set events that you are scheduling for week on calendar. It is great way for individual to get idea how their week is going to break out and look at one day at the time, Monday and Wednesday are similar days. Same pattern on these days, or whatever work situation is. By giving them idea of engaging them how long it is going to get task down gives them idea of completing it. It will be something to help motivate individual to perform task in that timeframe set.

>> Another tool for helping visualize this comes from cub by planning time management system called 7 weekly planning sheet. It is sheet that folds, you can put in your pocket or laminate it. It is great way to see week at glance and great way of practicing schedule in terms of what needs to be done and helpful in seeing things coming and really needs to be anticipated.

>> Along that same line sometimes just being able to assign priorities to task, that's another thing that I don't think is always understood by some of our employees with developmental disabilities. All the tasks are there to be done and so seeing which one needs to take priority they may need help figuring out. If supervisor can help clarifying that, if you can use a list or rank to help you clarify that, like A is most important and B, so individual can see priority to approach things that need to be done during day.

You can use electronic system that will help carry things around. You can carry on clipboard or some way in workplace where they can refer back. It helps them identify sequence or task to be focused on. It helps individual deal with time management.

>> Another neat thing we discovered, there's these tools we often see used in home, Google Home and Alexa by Amazon, tools we can talk to that talk back to us. There's skills and settings that you can use, can lists and they can be helpful in reminder of what is going to happen next, particularly when their hands are busy and they cannot pull out cell phone and work on their own or a clipboard. I will share with you that something we learned recently, Amazon, Alexa has blue print, these are set of skills that can help put into sequence so together they make up a larger task. You can get at blueprint.amazon.com. One is called Task Tracker, it puts multiple task into sequence. Alexa will be very engaged in reminding you, nuisance perhaps in keeping you focused on have you got it down yet, this step done, this step done and you use your voice to respond. It is great way to break target task down into manageable steps within frame work and cue individual in each step and successful step in target skill. I can imagine Alexa speaking with follow up tips and stuff to keep individual focused on task until they get it and encourage them to get it done quickly and effectively. That's something to keep in mind.

>> We also can look for time management tools that have spoken alerts, again Endeavor is one, you have calendar and needs to be accomplished system speaks up and reminds individual like Siri and Alexa will do.

>> Another one is time management system with visual

interface that is not dependent on text. My son Blake, is individual with Down's syndrome, he's coming up on 30 years and looking back to getting back in workplace after COVID-19 interlude. He used to work in place called special needs and treat bakery, needs called KNUDS. They developed work time management system for entire work crew that was all picture or symbol based and image. They were color coded. You see example on those on left side of screen where individual can check in with their time clock and go to this magnetic field. Sometimes they had printed version. You could go to your name and see task you were going to do for that day. Was real useful tool for individuals to check in and independently see what it was they were going to do that day. Get their tools and get down to work.

>> Other things you can use, pocket picture planner, visual schedule and visual month apps that do similar kind of things. Those might be tools to take a look at.

>> We covered a lot of ground about time management and trying to address appointments and meetings. Anyone have any questions that we need to address an at this point.

MODERATOR: Nothing has come through yet, but just reminder if anyone has questions I will be sure to let you know.

BEN SATTERFIELD: Thanks Tori. Let's talk about staying on task. It is not issue isolated on them alone. There's several solutions that have come forward that I think is worth sharing here. We will talk about some of these here. Again, checklist is great way to do this in terms of having individual have something they can return to when they get distracted. Sometimes challenge is what was I doing before I got distracted and do I have something that can orient me back to task. Another way to do is with apps that has ability for this digital check off list to be monitored by not only the worker, but also the manager. So both will see checkoff list, and as individual checks off items as they are done, a teammate or supervisor or job coach, whoever is working with them at the time can keep track from distance, not be intrusive in workplace, but just see they are getting work done. There are several brands of these. URL is pretty straightforward, Trello, Tick Tick, Squid Hub, Toodle do and Zenkit. They all have [Inaudible] and then there's enterprise and business version. They run from \$3 up to \$21 a month in terms of getting full blown and professional version. These are tools that might be worth taking a look at.

>> I also found out about one, it is actually a list that's intended for two people to share, a grocery list called Our Grocery, it is free on Android and iOS. I will be at store and my wife can add something to list, I see it pop up on my cell phone. She can see what I found and haven't found. The unusual thing is on isle with XYZ and guide me to where I need to go. That same app can be retasked to what we are talking about in workplace. This is tool that might really work for individuals that you employ.

>> Sometimes issue in terms of remaining focused and saying on task is not so much remembering what you are supposed to do, but this access pinned up energy and it needs to have release valve. So sometimes having a variety of way to have individual blow off steam why they are not necessarily having to depart from work stage is helpful,

sometimes giving them fidget is helpful where individual can siphon off extra energy. Sometimes changing seating or posture can help, we might have ball chair for them to sit on temporarily, or work station where we can raise or drop and change posture and get a chance to work from a little bit different perspective for a little while before returning back to original. So having those available might be good anything. Sometimes we just need to run or ride and get exercise. So putting exercise station in work station is great way to burn calories, but also way for individual having that energy to be bouncing off wall. To have a way to appropriately siphon off some of this access energy. There's several ideas there. Anything we can do that will allow appropriately way to channel off access energy and extend worker's time on task and their work.

>> Simple way to address this is just change task during the day. Sometimes there's tendency to wok on something until we get it down. For some of our workers having a break or being able to switch from one task to another, may be it is just part of being a part of one task if it is appropriate. That may be be a way to kind of shift the focus and get little bit different focus and then short breaks may be a good idea as well.

>> So Elizabeth asks are electronic tools that you are recommending accessible to individuals who may have multiple disabilities accessible to navigate with jaws and other applications?

BEN SATTERFIELD: Great question, challenge, they are going to need to navigate while they are in work task, look at individual challenges and it's they are doing. Some are and I'm one is going to be a little bit different. We have to look for the best of the options available to work for individual. That is one of things about Work ACCESS tool is that it is not just going to spit out one solution, but it will give you several. To degree we have informed the expert system the needs that individual has, task and workplace, hopefully the results that it produces will be most appropriate. But you will probably get more than one and get a chance to figure out which one is most appropriate for that individual. You are asking a great question and the answer is, it depends. We are going to have to look at each one of these tools to see how appropriate it is for the specific individual that we have in mind. I'm not sure that's a really neat and tidy answer, but that's kind of best I can give you until we get down to specifics. If we want to take that off line and revisit that, I will be glad to focus on individual with specific disabilities. I hope that helps. Any other questions? Thank you.

>> So change task, provide short break. I was going to get on to question so see if there's any other questions.

>> We have one more section that we want to talk about. Did anybody else have a question?

>> No, we are good to go, nothing else has come in.

BEN SATTERFIELD: We want to spend time before we leave learning a new task and specific. A lot of times learning a new task, we need it to be done a specific way, not just done any old way, because we are passing a tool on to somebody else and it is part of finished process.

>> There's number of things we want to do relative to learning how to support individuals on how to perform tasks, there's remembering steps in task and remembering specific information [Inaudible] these are

problems identified for us in our crowd sourcing.

>> One of key elements in employing individual is remember and learning how to do task analysis, breaking a task down into component step is key element in getting it right and being able to identify parts for each step in process that need to go into doing that. Sometimes having video representation or visual model can make a big difference. We can list things if we want to, but I think seeing it and having a picture to show us exactly how to make that fold on T-shirt or how this particular label goes on that piece of mail or whatever, it is critical in terms of being successful.

I got HD, reveal here, there's another app available in iOS called Word 2, it is inexpensive app that allows you to shoot video on fly. It is great way to provide video in realtime how you want task done and give teammate idea how you want to perform task, take that video image and present to user makes a big difference if we have employer with visual [Inaudible]

>> We can also provide images in number of inexpensive ways, I'm reminded of situation that occurred with my son Blake when he was working at grocery store and doing community supported work as part of school training. He was in vegetable and fruit department, he and manager got along great. He was always very complaint. One day they told him to take a look at banana's, they said take bad banana's off shelf and put in box and put fresh ones on top. When they came back a few minutes later they were all stacked in this gigantic mountain with fresh banana's at the bottom and bad ones at the top. They said you did not do what we said. I wonder if they showed him what a bad banana looks like. We also make banana bread at our house. So sometimes just putting image of what you are expecting in front of individual makes all difference in world. You can use flip chart sort of thing. You can get those at Wal-Mart or other places that provide exhibit material. You put get a talking picture album from hallmark store where you can record short message that goes with image, so you can take picture of task and include auditory to go along with it.

>> Some of these are really inexpensive like \$10 a less. If we have individual who needs it, we might consider using voice out put communication aid, that might be useful in helping individual communicate specific aspects of task or have them listed in sequence so they are auditory as well as visual support to complete. There's apps like ableing company that shows you step by step the prompts that you are going to need. Sometimes we can use like watch reminder that will have a have been cue or prompting to remind individual what needs to come next or what's next on list. We want to customize these to fit what works best with employee so language that is used is something that he or she understands.

>> I think this is kind of what we talked about before, but when we are looking at specific information to complete a task we can use the written as well as the sound recordings and electronic files to provide reminders or cheat sheets, little lists, or visual cues to help individual remember how to -- the specific information they need to complete a task just in terms of reminders about sequence, we can also provide those special reminders and cheats they might need.

>> The last issue we want to talk about is how to access on the job training and make sure training materials are accessible. Sometimes you have them already, but when we bring on individuals with disabilities particularly developmental disabilities you might want to have particular training available, make sure, if it is recorded has video captioning, or at least a transcript, also, if there's element in there you have descriptive material. You are probably going to want some repository where individual can know where to go and fill in blanks with they are seeing.

>> Lastly, your likely to wind up in some situations where you are changing task where prepackaged is not going to be available. Having a way to do hands on training and give individual opportunity to work with another employee going same job with modifications gives them opportunity to have it mod eking for them and give them feedback and coaching on how to do it well.

So making provision on one-on-one training particularly if you are modifying task is great way to make sure individual who mastered it's, it is great way for individual who is learning task so learn better by teaching to someone else. So making a space for those one-on-one and hand on training is great way to go.

>> I want to close by giving you example or pointing you to something that I think is really nice development we just found out about a little while ago, it is cognitive tool, it works in group homes all situations. It has app to carry around and information board centrally located. They are all touch and interactivity. You can use eye gaze, auditory. When individual is in workplace working with their cell phone in hand there's centrally located board where individual with disabilities can all reference at the same time, who is doing this work at this time and who is working on different task at different time, all checklist and completion information is included in these apps and somebody can be remotely checking in, a coach or coworker can look online or computer and be able to check in to see who has checked board, which apps have been checked off. If you are using this for multiple individuals at once, it is great way to facilitate a lot of individuals at the same time.

One of neat things this group Routine Factory created they set up way to put [Inaudible] on different situations. So have individual needs refresher on steps or don't have reminders how to do that particular task they take their phone and qr reader and just line up can qr code and that comes up with that particular station. What this company has done is put together a lot of these ideas. You don't have to incorporate all of them for your situation. Just seeing how they all work together. If you go out to routinefactory.com and see video they created it is great starting point if thinking about workplace.

>> Running a little bit long here, I want to see if there's any questions. If you have to run along I understand. If there's any questions I would be happy to address at this point.

MODERATOR: None is coming along. First I want to say thank you Ben for this presentation on cognitive aids in workplace. This recording will be available on Tools for Life wiki page within next few days also along with link to Work ACCESS video we showed earlier and this Power Point will also be in accessible format. Anything else you want to

add Ben?

BEN SATTERFIELD: In closing we are at stage, we are ready to do validation on decision tree's as they exist. We would love to get participation of people in field. There's link on screen. Maybe somebody can add to chat window. If you want to click on this link and be able to take part in our decision tree validation process, we would love to have your help, there's reward for it, if you will sign up and be a part of this. We appreciate your assistance.

>> This is Karen, we will have one of those up by end of late today and with others coming later this week. I think Tori said she might be sending out link with CRC information.

BEN SATTERFIELD: Thank you everybody for being a part of today. This is process that's ongoing and that we will always want to improve. If you have input or suggestion connect with you, we want to know how we can make this process work with your process and [Inaudible] folks you hire in your workplace thanks and we look forward to seeing you again soon.