SPEAKER:  
You are listening to everyday evidence presented by the American Occupational Therapy Association, helping the Occupational therapy practitioner apply evidence to practice. Here's your host, Matt Brandenburg.

MATT:  
OK. On today's episode, we are joined by Dr Joan Toglia and Dr Erin Foster. Joan is the dean emerita of the School of Health and Natural Sciences at Mercy College in New York. You are truly a legend in occupational therapy and internationally recognized for your research and contributions to neurorehabilitation and cognitive impairments. And I had the privilege of learning from Erin at Washington University in Saint Louis, where you're an associate professor. You also have extensive knowledge and expertise related to cognitive functioning and its relevance to occupational performance. Both of you have been involved with AOTA contributing to systematic reviews, practice guidelines, official documents, and quality of care initiatives. I want to thank you both so much for being on the show today.

ERIN:  
Thank you for having us.

JOAN:  
Thank you, Matt. And thank you for that introduction.

MATT:  
Yeah, it's my pleasure. So you two co-authored a new textbook called The Multi Context Approach to Cognitive Rehabilitation, a Metacognitive Strategy Intervention to Optimize functional Cognition. I'd love to discuss this today along with some of your research and practice recommendations for OT practitioners. But to start out, I have some background questions to get us all up to speed. The first being, what is functional cognition?

JOAN:  
Great question. So functional cognition is the integration of cognitive or thinking skills with everyday performance. So, so many of our everyday activities involve a multitude of cognitive skills. So whether it's following a new recipe, cooking a multi-step meal, or even just think about going to a supermarket, you have to plan the trip, figure out what's needed, remember where things are in the aisles, you want to organize the list to minimize going back and forth and then problem solve if locations are changed, you have to select items and make substitutions when they don't have what you need, and then you have to filter out the noise, the clutter, and stick to your goal. So those are just examples of some of those everyday activities that require the integration of so many different skills visual, motor, and cognitive with performance to accomplish the task. So really functional cognition incorporates executive functioning and other cognitive skills within the context of the demands of the activity and the environment. So that's how I describe functional cognition.

MATT:  
Thank you. That's a wonderful description of a functional cognition, and it really is such a broad topic that encompasses so much related to function. What motivated both of your interests in functional cognition?

JOAN:  
Well, my interest goes back 40 years. I'll let Erin describe hers, but I go back 40 years when I worked on a head injury unit as a young therapist and saw many clients with difficulty keeping track of information, focusing, or organizing. And they had very little awareness of their difficulties. And at that time treatment was very impairment or tabletop based and didn't really translate to function. And so... and I recognized there was this disconnect between what I saw in more abstract tabletop tasks and function, so I was very motivated to try to understand functional cognition more so I could help my clients. But that was a very long time ago. So, Erin, maybe you...

ERIN:  
Yeah. So my story, or at least the content is similar to what Joan just described. So as an OT student almost 20 years ago now, I was, you know, generally interested in neuroscience, neuro rehab, and cognition. And I had some excellent mentors and colleagues at the time, including Carolyn Baum and Dorothy Edwards and Lisa O'Connor and Naomi Jasmin, and also Joan. And we were, you know, still grappling with this fact that neuropsychological tests and these tabletop interventions don't really tell us, as OTs, what we need to know regarding how people use their cognition in their daily lives, in real-world activities or the direct relevance of cognitive impairment to occupational performance. So that was sort of the general issue that we were thinking about. And then in terms of my specific population of interest, Parkinson's disease that gap between what we knew about cognition from a neuropsychological and neuroscience perspective and then how that played out in daily life was extremely obvious to an OT at least because, you know, it's a very OT issue. So this general idea of functional cognition which I'll say has been around for a while, but fortunately is now being really newly championed and refined and brought to the forefront and OT was really just a natural fit with my interests and my research and we've sort of evolved together over the past 20 years.

MATT:  
It seems like both of you were motivated by wanting to make intervention more efficient in helping people really return to functional performance when they have cognitive impairments. What experience have led you to generate and disseminate so much research and resources related to this topic?

ERIN:  
So I'll start, again, it's just been the natural evolution of my interest in my work. And at the beginning, it's just the recognition that OTs are ideally suited to address functional cognition. In fact, we need to address these issues to fulfill our charge of enabling people to perform and participate in their meaningful activities and roles. It's a big piece of the puzzle that had been missing, and I think OTs have the specific skill set and knowledge to do so but we need evidence to back it up and then tools to support quality delivery. So the research comes in to generate the evidence to support functional cognition assessments and interventions and OT's Central role in those things. And then the dissemination of resources and tools is really necessary to enable implementation of these complex approaches because they're not, you know, it's not simple to administer these assessments and interventions, and so it helps to have, again, tools and resources to really support that delivery. And then my hope is that these two things will come together to really give OTs the confidence that they need to own functional cognition in practice.

JOAN:  
Yeah, I totally agree with that. Very well said, Erin.

MATT:  
Thank you so much that all we can do to promote the confidence and competence of practitioners is very much supported, very much appreciated, I should say, being a practitioner myself. Why do you two feel it is so important for OT practitioners to use evidence to inform their practice when working with those who have cognitive impairments?

JOAN:  
Well, I think, first of all, the evidence helps to improve the quality and effectiveness of our services, but it strengthens the value of OT services. So, for example, and we've touched on this before, that there's really no evidence that practice with the contextualized cognitive exercises or worksheets or playing a concentration memory game, practicing picture or word recall. There's no evidence that that automatically generalizes to function, but also there is no clear value of what OT is or what the difference would be if that client played concentration with a family member or worked on a decontextualized cognitive exercise with another health professional. And there are so many evidence-based methods that have been shown to help optimize performance in people with cognitive impairments. That can be done within the context of occupation and meaningful activity. And I think that we have an obligation to be aware of best practices and informed of evidence to really best serve our clients and achieve the best outcomes, and of course, the funders and policymakers once services that are evidence-informed. And so I think it increases confidence and trust and better articulate our value and our unique role in functional cognition.

ERIN:  
I completely agree. And just to sort of stress the fact that the evidence and in addition to improving the quality of care that's delivered, you know, is really a tool to promote, to be communicated and to promote buy-in among other professionals. And as Joan said, funders, so that it becomes, a way to advocate and that it becomes recognized that this is an important role, an important and effective role of OT.

MATT:  
Absolutely. And we'll touch on later some specific things that practitioners can do to fulfill those messages and calls with advocacy and working with other professions. But I do have some questions about the material that your new textbook is coverage and really just some foundational knowledge about cognition and the multi-context approach to start off, how are executive function and memory impairments expressed in everyday life?

ERIN:  
Well, they can be expressed in so many different ways within and across individuals, so they can first, starting off with occupational domains, they can negatively impact all occupational domains from social and leisure participation to work to IADL performance to health promotion and management. So Joan gave that great example of grocery shopping and all of the sort of cognitive processes that need to come together to support that task. You can also think about somebody's ability to take care of themselves, to manage their medications, to make sure they're doing their home exercise programs, and to determine and follow a healthy diet. They can also, you know, executive and memory impairments can also manifest in behaviors like lack of initiation or lack of follow through with tasks that other people may interpret as laziness. It can make somebody look like they're rigid or inflexible or maybe rude or impulsive, for example, if they're interrupting people or people may digress during conversations or lose track during multi-step activities. They may forget to take their medication or turn the stove off after they finish cooking something which could lead to potential safety issues. Executive and memory impairments can also result in negative psychosocial outcomes within people, like a loss of self-identity. If their cognition has changed, or low self-efficacy, even poor coping skills. So they can really manifest across a broad range of activities and behaviors in people's daily lives.

JOAN:  
And I think that's important because it really does touch sort of every aspect of a person's life from activities of daily living to social participation, and also to just managing one's own health, to be able to manage your, as Erin said, your medications, but also think about your, all your appointments that you have. And sometimes that involves adjusting your routines based on instructions, for example, or instructions to help maintain or promote your health, changing your diet or adjusting recipes. So I think it really goes across all aspects of somebody's life.

SPEAKER:  
We'll get back to our interview right after this quick word. We try to make research more applicable and more consumable for our listeners, and completing the survey that we mentioned on each episode helps us to do just that. AOTA members are now eligible to receive a one contact hour for listening to an episode of our show and completing the survey. The survey is still only three questions long and can be found by following the link in this episode's description. Get yourself a contact hour and help us to improve the show, improve the resources AOTA provides to its clinicians, and improve the application of evidence to practice in our field. Now back to the interview.

MATT:  
I know the dynamic interactional model of cognition is foundational to the multi-context approach. Can you explain to us really what the dynamic interactional model of cognition is and how it's used within the multi-context approach?

JOAN:  
Sure, Matt. So the dynamic interaction model is a theoretical model of cognition and cognitive performance that was published in the very early nineties. And it really said that cognition and functional performance is really best understood by analyzing the dynamic relationship between the person, the activity, and the environment or context, and in a way that reflects the contemporary view of metacognition. So the dynamic interactional model was saying that it's not, cognition is not all or none, small changes in the environment, in the demands of the activity, changing the directions, the way an activity is presented can significantly impact performance. So in order to really understand cognitive symptoms expressed in performance, you really need to look at how is the person going about doing the activity, which strategies are they using, what is their awareness? So you're looking at the person's factors as well as the activity demands, as well as the environment and this supportive environment, that familiarity of environment. So you're looking at many things to really understand performance. And the dynamic interactional model is really a broad model, right? So it accommodates different treatment perspectives because it's it indicates that treatment can enhance cognition by focusing on modifying the activity or the task or by enhancing the person's strategies or tasks, methods they use, or their self-monitoring skills. So the multi-context approach is based on the dynamic interactional model, but the dynamic interaction model is much broader. The multi-context approach is narrower in scope and it focuses more on the, enhancing that person's awareness and self-monitoring skills and looking at the types of strategies the person uses, and optimizing strategies within the context of functional activities. However, at the same time, the task and environment is always considered and analyzed and sometimes adapted or modified to be at the just right challenge level because when we're working on awareness or strategy use, the activities have to be at that just right challenge level, not too easy and not too hard. Right? And so the dynamic interactional model sort of provides that framework, but it is broader than the multi-context approach.

MATT:  
And Joan, one of the things you mentioned in this kind of person factors and how they interact with the activity in the environment was the use of performance-based assessments. What can practitioners do to promote the use of performance-based assessments of cognition in their clinical care?

JOAN:  
So I think that's really important. I think that performance-based assessments and having that direct observation and analysis of performance is just so key to everyday practice and to be able to understand functional cognition. And there are so many resources that are out there right now, and I would just encourage practitioners to use all the resources for one. I have a website, multicontext.net, that has lots of performance-based tools and links to performance-based tools that are out there in the public domain or that have been published in articles. And there is a page for adults and a page for children as well on performance-based assessment. And some of the links are just two articles and some of them are to the tools themselves. And I think, and what I've seen is when I've worked with different centers is sometimes it's hard for practitioners to change their habits in the way of assessment, but all it takes is one person, a champion that starts using a performance based assessment and everyone else then notices and starts to be inspired to do the same. So I encourage practitioners to be the champions and with performance-based assessments and to try some of those new tools that are out there. Erin You might want to have other suggestions.

ERIN:  
Yeah, I think I think that's great advice, Joan. And just going back to our discussion about the importance of using evidence, you want to try to use assessments that have an evidence base so you can communicate that to your team members. And ideally, assessments that have been validated in your population or close to it, although, you know, we realize that these studies are still emerging and in the absence of potentially evidence-based, standardized assessments, you want to make sure that you're using standardized methods and reporting on them in standardized ways. So that could be a form that you've developed that may be based on existing tools that are out there, but that's something that you could share with your team to ensure that everything is sort of everyone is doing things in the same way. And in clinical practice, performance based assessments are really great because they allow you to use a combination of, of quantitative information like scores and tallies and qualitative information like client responses or therapist observations to document function and change in function. And then going back to what Joan said about sort of being the champion in your practice that also comes with making sure that you really communicate back to the team what the added value of these performance based assessments are. So what you can learn and observe from this assessment approach that you can't really glean from traditional cognitive tests or questionnaires. So information on the process of how somebody is going about performing a task, what sorts of errors they make, how much assistance they might need to be successful, or what types of assistance they may need, their awareness of their performance, what strategies they use, how they interact with their environment. So there's a ton of rich information that you can gain from these assessments, and it's about communicating that to the team and the clients themselves.

Matt:  
Absolutely. Absolutely. I couldn't agree more with the fact that all assessment is important and essential to clinical practice. But performance based assessments really paints a more detailed picture of where a client is actually performing, how they're doing in their occupations, and then helps setting goals and designing interventions. So thank you both so much. Let's shift our focus now to the multi context approach itself. How would you describe the multi context approach? What is it?

Joan:

Now, that's never an easy question because it's really a complex and multi-component intervention that uses an overarching metacognitive strategy approach. And there are many components of the multi context approach, but I'm just going to focus on the top three and that the first is that the multi context approach focuses on online awareness of performance. That means helping a person recognize and be aware of performance challenges within an activity. And so cognitive difficulties are not task specific. So if somebody misses steps or over it tends to detail or get side-tracked off tasks. Those kinds of error patterns or performance difficulties end up interfering with performance across many different functional activities. And so the multi context approach tries to help a person understand the kinds of conditions where those kinds of symptoms are most vulnerable or likely to emerge. And those kinds of conditions where those error patterns are not a problem because cognition is not all or none. So helping someone sort of really recognize and monitor and be aware of those performance challenges both before optimally before they happen or in treatment are often starting during the activity. And as awareness is improved, the next thing is to optimize strategies because strategies help you manage performance errors. So in the multi context approach, there is a focus on guiding the person in self generating solutions that we're using strategies effectively to manage those performance errors. And then the third focus is transfer and generalization. So the multi context approach is trying to focus on helping to manage those performance errors that tend to interfere with performance again across many activities. And so we structure treatment in a horizontal way to help people see the connections between activity experiences to sort of help promote that transfer and generalization. And so there is a focus on almost immediately applying strategies as they emerge in treatment to another activity. We try to always use two activities within the treatment session whenever possible. So the multi context approach is an approach that's trying to help patients sort of stay a step ahead. In other words, sort of monitor, recognize when cognitive errors tend to emerge and try to empower the person to manage those areas themselves and optimize performance. So I don't know, Erin, if you want to add to that. Now, I think you had the three main components, the cognitive strategies, the metacognitive framework in mediation, and then the horizontal structure to promote transfer, transfer and generalization. And then also, you know, so those are kind of the unique components of the multi context approach. But then this idea that it's an empowering approach. That promotes self-efficacy and confidence in the clients and that it's a client centered approach that uses meaningful and relevant daily activities and roles. Those are also some pieces that are important for occupational therapy practice.

Matt: Absolutely. What practice settings and client populations are appropriate for applying this approach?

Erin:

Well, the multi context approach is very flexible and it's broad, and so it really can be applied across a range of settings and populations. It takes time. So acute care is probably not the best setting for this type of approach. It also requires the ability to develop awareness and the ability to learn. So it may not be so appropriate for people with severe cognitive impairment or intellectual disabilities or moderate to severe dementia. But otherwise it can be used in across settings, in inpatient settings. In fact, Joan has published direct evidence for this in outpatient settings in home or community based settings. So we have a Parkinson disease study going on right now that takes place in people's homes. It's been used in schools. It's been used across the age range in people with very mild or subtle deficits to more moderate cognitive impairments, and it can also be used in groups. So the book has some guidelines for using it in adult neurological populations. It's also even been used in middle school classrooms. The book also has specific recommendations and considerations in using it with different types of clients. So clients with low self awareness. Clients with either lower or higher cognitive functioning and even clients with spatial neglect.

Matt:

And at this point, I'll be honest, the more the context approach sounds almost too good to be true in how broad it is and how sound its theoretical basis is. Can you share what's the evidence behind the multi context approach? Can you share some of the evidence based treatment methods for applying it to practice?

Joan:

Sure. So at a general level, the metacognitive strategy intervention itself is evidence based and has been demonstrated to improve functional performance across a wide range of studies for people with acquired brain injury. It's actually been identified as a practice standard by systematic reviews in the cognitive rehabilitation literature. But the individual components of the approach, metacognitive methods, the strategies, the self generation of strategies and the use of guided rather than direct cues, these are all components that have evidence support. In fact, one of the first studies that one of my colleagues and I did, Dr (UNKNOWN) We did two groups of clients and both had the same functional activities or did the same functional activities as outpatient acquired brain injury. And one group was also given metacognitive prompting or questions, and the other group did not. They just had the practice with the activity. And we saw significant changes in functional performance with that metacognitive piece. So we have sort of the overall approach. We have support on the individual components and then we have the multi component, multi context intervention itself, which is complicated to research because it is so complex, but that has been studied in people with chronic brain injury. And as Erin mentioned, I've been involved in a case series in an acute inpatient rehabilitation setting and we're doing a pilot randomized trial right now in that setting. And then, of course, the study that's also being done with early Parkinson's disease. And there have been cases also reported in individuals with visual perceptual disorders, a case with COVID, a case with stroke in Argentina. And so, of course, we need more research, and we are hoping that publishing some of the tools in this book will help facilitate that. In terms of applying the multi context approach to clinical practice, it does take time and training and we developed a therapist fidelity checklist. And fidelity is implementing an intervention as it is intended. And so this checklist, which is in the public domain, it is a supplement to an article and it's also in the appendix of the book. It's sort of a self checklist that sort of has the components of the multi context approach that the therapist use... can use to sort of self evaluate their own treatment. It can be used in supervision and we also have used it in training. But we do find that the multi context approach takes practice because it's one thing knowing the principles and knowing what you're supposed to do, it's another thing being able to do it on the spot. And the studies that we have used indicate that a training and reflection and video review especially can be very, very useful for therapists in terms of gaining skills and competency in this approach. What are... what other recommendations outside of this fidelity checklist would you give to practitioners who want to use the multi context approach? So, as you've heard, it's complex and it's flexible, which it's great for the use and the effectiveness of the approach itself, but that also means that it could have kind of a steep learning curve. And it also requires... it may require sort of a paradigm shift for many therapists who are used to administering treatment differently. It requires therapists to focus on the process of how somebody goes about doing a task versus the outcome of that task. It requires therapists to use questioning and guidance to try to get people to solutions versus just telling them the solutions.

Erin:

And so as Joan mentioned all of this this stuff requires a lot of practice. And so, you know, I would recommend that therapists give themselves time and grace when they're trying to learn this approach. And I think some of the first steps would be to learn about the approach and the methods cognitively. So, gain the knowledge, read the book, attend workshops. But then you really need to practice using those methods. It takes active learning. It takes reflection. Therapists tell us time and again the value of recording themselves, administering the multi context approach and then reviewing it. And this can be done with others, with colleagues, reflecting and reviewing your own performance and getting feedback from others and just, again, it's that practice and repetition and the fact that it's not a one time thing it takes time for your expertise to evolve in this approach. And, the book actually has an entire chapter devoted to this question. So it provides a step by step process for how you know, what steps therapists can use, what worksheets they can fill out, what sorts of things they can think about, so they can learn and apply and develop proficiency in the approach itself. I love that. In a way, it's almost like using the approach on yourself so that you can use it to help your clients. Yeah, it's true. It takes a lot of metacognition and self-monitoring and problem solving to gain proficiency for sure. Yeah, and it's true. And that's actually something that our therapists have said in some of our studies that they found that they were improving their own self reflection and metacognitive skills as they were helping clients. So that's very true. That's wonderful. That's wonderful. What are some of the additional cognitive strategies used in the multi context approach, and how are these strategies used to promote occupational performance of clients? So in the multi context approach, one of the things that makes it more complex is there's not one strategy and there's not a prescribed strategy that the framework is broad and it accommodates a wide range of external or internal strategies. The book describes general strategies for multiple step activities. It describes emotional regulation strategies. It describes strategies directed toward particular performance problems or a combination of strategies. And so the first step is, yes, the therapist needs to have a knowledge or repertoire of the strategies that have been found to be helpful in facilitating performance. But more importantly, the multi context approach describes a framework for helping therapists understand, analyze and guide the person towards strategies that match the person's performance problems. So for example, let's say a person easily loses track of directions or steps that they just completed. So in the multi context approach, you might ask, well, what can you do? You might ask the client, what can you do to better manage and keep track of all of these steps? Or how are you gonna manage all of this information? And then there is a series of prompts where you can say, Well, what can you say to yourself to help you keep track? So you start to become more structured in that prompting, or what can you write down to try to help you keep track of all these steps? And you also use your observations. You might say, you know, at times I saw you talking to yourself. How did that help you? So you're trying to increase awareness of methods that the person might be using inconsistently and may not even realize that those were methods that were helping them. So you're observing sort of the process and really matching the strategies to the person's needs and to the kinds of difficulties that the person is experiencing. Another example is if a person is easily overwhelmed by the task and of course somebody that's quite overwhelmed, emotions can sort of shut down information processing. So in that case, the focus might be on trying to help the person use positive self coaching or stop, relax and take a deep breath in and try to regulate those emotions. So the strategies will really vary depending on the person. And I love that focus of the approach as well. It's one thing to learn the strategies and have a variety of strategies in your toolbox for intervention. But it's a whole nother to choose the strategy that's best for the client, and it's gonna help them perform at the optimal level. Yeah, exactly. How would you recommend a practitioner could structure intervention to really promote the best outcomes for their client of awareness and strategy transfer? So this involves setting up activities, at least in the beginning of treatment, so that it's easy for a person to see the connection between activity experiences. So we use this sideways learning approach or horizontal structure where there's a series of activities that have similar cognitive demands, but they look different gradually on the outside. So as an example, a simple example is if you have a list of items and the person has to check whether those list of items are on a schedule or on a menu or in a kitchen or a list of items to maybe pack a lunch, they all involve a list and they all involve sort of looking at that list, keeping track of what you just read as you look away to then find those items. So in an activity, simple activities like that, of course, many different kinds of problems can emerge or difficulties can occur. A person can get side-tracked or distracted by other information that's on the schedule or the menu. They can start talking about a time that they... Or we're at another restaurant, or they can get totally off task by sometimes these just little irrelevant pieces of information. So again, the therapist might guide the person in saying, what are some things you can do to help you stay focused and resist some of these distractions. So you're trying to raise awareness and so if you do that in a task that involves sort of finding things on the menu, then immediately you would switch and then give a task that involves finding a list of items on a schedule, to see if you see generalization and carryover of the awareness that just emerged or the strategies that just emerged. So you're looking directly for carryover and transfer within your session from one activity to the next as well as between sessions. And so at the end of every session, we also use bridging questions that say sort of what did you learn from this activity experience and what other activities could this strategy be helpful in? And with higher level clients, we've had them create or write an action plan that specifically identifies activities that they plan to use as strategy in their everyday life and then report back.

Matt:

What would you say is the difference between a direct strategy method and guiding learning methods that are used within this approach?

Joan:

Well, most simply, direct strategy methods would be telling the client what strategy or strategies to use and how to use them. Whereas guided learning methods are more about structuring interactions to provide the opportunity for the person to discover or generate the strategies or solutions themselves. So with guided learning, the therapist might know or think they know what strategies are going to work to help the person manage their particular errors but instead of just going ahead and telling the person what those strategies are, they use questions, prompts and experiences to get the person to arrive there on their own.

Matt:

And what would you say is the benefit of a client arriving to that strategy on their own?

Erin:

So there's literature, there's evidence out there that for this thing called the generation effect or the self generation effect. And it's that when people sort of generate their own information, they can better remember and apply it in the long run. And so this may also translate to strategies. When people generate their own strategies and solutions, they are going to be more likely to buy into those strategies and solutions and to use them. Versus just being told what to do. Another benefit of using these sorts of methods is that it has, you know, direct strategy instruction methods and direct cueing methods sort of creates the situation where the client or the person may become dependent on other people to tell them what to do. And so these guided learning methods help the person sort of develop their own strategies and their own awareness for coming up with their own solutions. So that they can hopefully, you know, generalize this disability to their everyday life so they can solve their own problems instead of having to, you know, wait for somebody to tell them how to do things or what to do. Joan, I don't know if you would like to add on to that.

Joan:

No, no. That's so true. I mean, when you see a client constantly looking at the therapist for sort of the next que, you see that sort of dependency. So a client is much more likely to buy in to the strategies and be motivated to use them when they've thought of them themselves.

Matt:

Absolutely. Sounds like a wonderful way to increase buy in and also self-efficacy of the clients. And I always think of it, it's almost like the movie inception. So it's kind of like you're finding the fun way to really intercept the use of this strategy with your clients. What are some guidelines or clinical applications for using guided or mediated learning within treatment sessions?

Erin:

Right. So I mean, essentially it's, you know, just trying to avoid telling the person what to do. That could, you know, look like making sure that you are not jumping in too quick to help a person if they're struggling. So sort of overriding that automatic tendency that we all have to help directly and instead, you know, trying to use questions or prompts to get the person to recognize that they may be making an error and that maybe there's a different way they can try to do the activity. So often times therapists will say that they sort of make themselves wait five seconds even before saying something. Again, to override that tendency to want to jump in and cue the person too quickly. other guided learning strategies have to do with the way that you phrase or frame things. So you want to try to avoid using negative words like problems or difficulties, and instead use more neutral words like challenges or, you know what part of this might be tricky. You also want to avoid yes/no sorts of questions and instead ask more open ended questions again, to promote the person's ability to think a little more deeply about things. You want to make sure that you're having discussions around the treatment activities that you are doing. So instead of just, you know, ending a session. Just ending a session after a person does an activity, you want to give them the app ask questions that encourage sort of self-evaluation or reflection on performance? I don't know Joan, what are some other?

Joan:

There are a whole host of guidelines and they're kinds of examples, a list of examples in the manual with scripts as well as examples of scripts. So I think that you really hit some of the key points, but there's a lot of other specifics within the book.

Matt:

Thank you for those. The clinical applications you already gave, I can relate to feeling uncomfortable with the silence and with watching a client kind of work through and figure out a challenge on their own. It can be tempting to want to jump in and provide more assistance, but what I've seen in my practice is really taking that time and giving it to my clients to problem solve and process through really does lead to increase performance on their end. So thank you for those recommendations. What client responses to Treatment Sessions should practitioners be observing, tracking and documenting?

Joan:

I can take that one. You know, one of the things about the multi context approach is that there is a metacognitive framework that involves these semi-structured questions that are asked before, during and after. And so those questions are sometimes used as a framework for documentation and for tracking progress. So, for example, before the activity, we're looking at the ability to identify challenges, to be able to look at an activity, size it up, figure out what's going to be tricky, what's going to be easy. And so some of the questions in the beginning are what type of challenges do you think you might run into in this activity? So that's also used in documentation, the ability to anticipate challenges. And of course, that sort of provides a basis for strategy generation. So we look at before every activity within a session and across sessions, the ability to anticipate and generate strategies prior to the activity. During the activity, we look at whether that person recognizes performance problems and whether they stop and adjust their strategies or try to correct those performance problems. And we also have sort of a mediation or a set of questions for mediation within the activity and then immediately after the activity we have a self assessment or post activity discussion where we're looking again at what kinds of challenges did the person perceive. And now based on the activity experience, are they able to generate new strategies and can they connect the strategies to other activities. So that framework of the pre discussion, during and post, actually provide a framework for tracking progress and documenting. There's actually examples and worksheets on there, within the manual as well.

Erin:

Right. And just to add to that. You know, it doesn't have to just be a simple answer, like could the client answer those questions? Did they generate strategies? But the therapist then can drill down and can provide sort of graded level of questioning or support. And so another thing that you can track is like, you know, what sorts of prompts did the therapist have to give to get the person to generate a strategy or to get the person to make a connection between this activity and a previous activity. So you can even get more detailed into the person's ability to, you know, anticipate challenges and generate strategies. And then there are also things that you can observe during task performance. Like what sorts of strategies are people using? You know, how effectively are they using them?

So, you know, there's a myriad of things that you can document in terms of the process of how somebody is going about an activity to kind of track their progress. And that's, you know, in addition to simple performance outcomes, like how well did they do on these tasks?

Joan:  
Yeah. And the other thing is that we also have created rating scales that sort of correspond to the metacognitive framework questions I mentioned. So based on the person's response, they could also be quantified and rated. And it also in a way, those rating scales provide guidelines for the kinds of probes that might be used. So those are also included in the appendix of the book as well.

Matt:  
Now, having those supports available seems really beneficial in translating this approach into practice. What would you recommend a practitioner do when a client is not progressing?

Joan:

Oh, that's always a tough one because it really depends on why. And so the first thing is taking a step back and analyzing why, what are the obstacles to progress. And so that really requires some reflection, analysis and clinical reasoning because there is so many different things that could impact progress. But, you know, if it's about the fifth approach or the fifth session and you're not seeing any progress, you do have to ask, is this the right approach. By the fourth or fifth session, changes should be seen. And so then you have to say, you know, is it that the person isn't carrying over or remembering things that are happening from day to day? And does that mean you have to put in maybe more supports for carryover learning or switching approach to more skill learning or test specific training? So it really depends on what the issues are that are maybe the obstacles to progress. What principles of goal setting and outcome assessment are valuable for practitioners to consider and implement with the multi context approach. Now, that's a great question because goal setting in people with cognitive impairments can be so challenging due to the issues of awareness. Because at the start of treatment, a person with decreased awareness often identifies unrealistic goals and there can be a wide discrepancy between the client's view of their abilities and that of significant others or clinicians. But I think it's important to acknowledge and validate the person's goals, even if you might think they're unrealistic, because we have to recognize that the person's perspective may be different because they haven't fully processed or recognized or even experienced sometimes the changes that have occurred. So, for example, after an injury or an illness, an inpatient hasn't had the opportunity to experience maybe IADL activities or work activities that are cognitively demanding. So they not may not be aware of difficulties because the hospital environment is so structured and so their goals may be related to motor skills or walking or increasing upper extremity strength. So in that situation we focus on their goals, but we set up motor activities so that there are also cognitive challenges and demands. We may put spread out materials. So something is in one room and they have to, a list is in one room, and they have to walk to the other room to see the schedule. So they're working on motor activities, but at the same time having to keep track and problem solve so that the person can sort of self discover problems themselves through experience in functional activities. And very often what we see is that goals start to emerge, new goals emerge or previous goals become modified. So in the multi context approach, the goal setting process is considered fluid and dynamic, whereby initial goals are often revised and adjusted during treatment as a person gains a better self understanding of their strengths and weaknesses. So goals are revisited, frequently revisited and rated throughout treatment, and very often the ability to have new goals emerge or to set realistic goals is almost an outcome of treatment. It's almost, you know, fostering that goal adjustment I think is an inherent part of an awareness training intervention. So it's sort of a bit of a different way of thinking about it. So we use these goal ratings or a simplified use of goal attainment scaling methods and for outcome measures that are proximal to treatment in addition to goal ratings and tracking goals and how goals change through treatment. We're also using assessments that look at awareness and strategy use, such as the self-regulation skills interview or the weekly calendar planning activity that involves probing of strategy use and awareness.  
Erin:

No. I mean, I think that, you know, just the idea that within this approach and I think cognitive intervention in general, the emergence of goals, the adjustment, the modification, the refinement of goals, that in and of itself is an indicator of progress, either the development of awareness. And so I think it's important to allow for that within treatment.

Because at the beginning, you know, until they have these structured experiences that help them better understand their cognitive performance, they're not necessarily really able to come up with appropriate cognitively oriented goals always. So that and then also the idea that it's important to have a mechanism for the setting and tracking of individualized goals, because I think that's really where progress can be shown.

Matt:  
That's a great point. And I think this manner of goal setting and measuring outcomes is one of the ways that the multi context approach is tailored to a specific client. I think we've touched on quite a bit other ways that the approach can be tailored to meet the specific needs of clients. Was there anything else either of you wanted to add in regards to that question?

Erin:

Yeah, I think we talked a lot about how it can be individualized, you know, anywhere from the cognitive strategies that end up, you know, being most appropriate for the person to the types of treatment activities that you choose. You want them to be meaningful and functionally relevant for that person. You know, to the level of assistance or mediation that the therapist is providing. You know, there are different levels of mediation that can be provided from general to more specific. And so it's all about, you know, understanding what that particular person's needs are and then matching, you know, matching the specifics of your techniques to those.

Matt:

Absolutely. How can this approach be used in inter professional teams and with families of clients?

Joan:

OK. Well, I think there is a number of ways. I think, first of all, the metacognitive framework and the questions that are asked can be used across disciplines. So being able to anticipate what kinds of challenges you might. Run into in this activity ahead of time. Is really important whether the person is doing a transfer or ambulating with a walker or doing a language activity. Using the guided questions and guided mediated methods can also be used. Those are things that are content free that could be used across disciplines. And I also think that the same strategies can be reinforced in different ways and in different contexts. So for example, if in OT performance is facilitated by using a list or through verbal rehearsal, that could also be shared with other members of the team. And so that maybe a list could be used during a transfer or a verbal rehearsal. Could also be used during an ambulation activity or a motor exercise. And I think the OT can help facilitate that across disciplines. And I think that's better in the end for the client because cognition, as we said in the beginning, it goes across all areas, it interferes with all aspects of a person's life. And in OT, we're focusing on those activities of daily living that are meaningful and relevant to the person and participation. But other disciplines also need to sort of reinforce the same strategies, the same methods in different contexts and in different activities. I think that gets a better outcome for the client. And I think with families, I think it's so important to help families understand the kinds of errors that they're seeing in everyday activities because it can be very frustrating for families. They may not completely understand it because sometimes cognitive problems look like behavior or they come across as behavior that can be misinterpreted, that the person is not really trying or is very self centered. So it's important to help the person understand the errors that they're seeing. And also the issues that we've talked about. Instead of jumping in to help and just do the activity for the person, helping families see how they can also facilitate performance through questions and through guided prompts, rather than just taking over the activity and doing it for the person. So it's almost like sort of a coaching with a family member as well. So I think that's a very important piece.

ERIN:  
Right. And I think, you know, one of the goals is, to get the person to, you know, make it. It becomes sort of, you want it to become their own habit, the pre, during and post sorts of questions and thoughts. So before they initiate an activity to size it up and anticipate potential challenges and plan out strategies and while they're doing an activity to stop and review and then when they're finished to kind of reflect on how it went. So you want them to sort of internalize that process eventually. And the more people, you know, on their interprofessional team, their caregivers, the more people who are using that metacognitive framework with the person and more frequently, you know, with that repetition, it's more likely to be internalized by that person.

MATT:  
I love that. Those are wonderful recommendations and I think can have really lasting impacts on the clients. If practitioners can take the time to share those strategies with coworkers and educate families in how to use this approach as well. It's story time now. One of my favorite parts of the interview. I want to ask each of you if you could share a case study or personal example of when you saw the multi context approach help someone with cognitive deficits attain a positive health outcome.

ERIN:  
Yeah. I'll go first. So, you know, I actually there's a great story of one of my own clients from our research study in Parkinson disease that's actually in the book. And I think it's a really great illustration of how somebody developed self-efficacy and kind of this knowledge that she can control her own cognitive performance. But since it's in the book, I'm not going to talk about that. And so I'm going to talk about another case that I love from our research study. My colleague Lisa Carson actually presented on this case at the most recent AOTA Conference in a workshop. But this is Keith. So he's a 60 something gentleman with Parkinson's disease and mild cognitive impairment. He had I think he scored a 24 or 25 on the MoCA. He was a prior mechanic, now retired and recently widowed, I believe, and living alone.

And so, you know, some of his cognitive performance errors was that he kind of jumped into complex tasks too quickly. And this showed up on the weekly calendar planning activity in his pre assessment and then also in treatment activities. So he was presented with this complex activity and without kind of pre-planning or spending much time thinking about it before he'd start, he would just jump in and get to work and wasn't really using any strategies to complete activities. So he sort of left things half done because maybe he'd get lost in the steps or miss important details. And his goals for treatment really reflected that performance problem. One of his goals was that he needed to figure out a way to keep up with all of his home management tasks. He was having a hard time keeping up with the cleaning and the maintenance. He would start things and then not finish them and not be able to figure out how to fit it all in his week. And then another goal is that he really wanted to work on making meals for himself and in particular, you know, being able to prepare healthy recipes instead of just making microwave meals. So in treatment, the therapist selected complex treatment activities for him to work on. And so these activities had lots of details and information to sort through and keep track of. And they really require sort of a planned, organized approach to be successful. And so she had him do these sorts of activities in treatment and repeated experience with those sorts of activities. The goal was that, or the idea was that they would that he would start to recognized kind of his tendency to jump in too soon and miss details. And so that is what happened in the initial treatment sessions is that he would jump into these tasks too soon. He wouldn't plan, he wouldn't use strategies. And, you know, he would either not finish because they would take too long, because he would get lost in the task or he would finish, but miss important pieces of information. So he wasn't entirely accurate. And when the therapist worked on, you know, the pre activity questioning with him about, well, what could you do, you know, to make sure that you didn't miss any important details or that, you know, you did everything you need to do. At first, you know, the only strategies that he could generate were things like, well, he just needed to be better at concentrating or he just needed to get better at keeping all of the information in his head. But, you know, those aren't really strategies. And so with repeated experience and questioning and mediation from the therapist, he was eventually able to generate the strategies of writing out the plan and the details. And then a little later, he generated a further strategy of checking off the steps as he went so that he could keep track of himself during these activities. And, you know with practice, in developing and then using these strategies, he, you know, became really good at the activities. And then the cool thing was that, you know, Joan had mentioned doing these strategy, bridging conversations, is that during these strategy, bridging conversations, he was able to think back and connect the treatment activities and the strategies that he was discovering and treatment to something that he had done in his prior life. And so we talked about how as a mechanic, you know, he remembered how important it was to follow the step-by-step process for diagnosing a problem and solving it. And I think he called it Don't get ahead of your plan. And so he was able to sort of recognize that before, you know, he actually did use these same sort of strategies for work. And now he can bring them back. He can use them in his daily life to be more efficient and to accomplish everything that he needed to accomplish. And so he was able to apply those strategies to his goals of managing his home and then also to making new recipes. And so it was just really great to see that evolution, you know, in treatment and then see this client be able to directly connect what he's doing in treatment to his past, as well as to his current and future goals.

MATT:  
Absolutely. There really is no feeling like helping a client or observing a client have their own kind of light bulb moment. And that sounds like such a powerful connection that Keith was able to make. Joan, was there a clinical example or personal story you'd like to share about using this approach?

JOAN:  
Yeah, I was going to give a very different type of example of someone that was a lower level in terms of their awareness and functioning. This was somebody that was actually five years post injury TBI, and she was living with 24-hour assistance and her goal was to work better and have better balance. But she denied any problems in memory, thinking or concentration. And in multiple step activities, she was easily side-tracked. She missed information and she lost track of the directions and sometimes the goal of the activity itself. She was, though, if you asked her what she wanted to work on in treatment and asked her what activities she would choose, she would say computer games, but she played computer games all day in her apartment. And so she didn't make the connection that one of her goals that emerged during treatment was that she wanted to live independently. But she didn't make that connection, at least initially, in terms of her goals. So, we started with a series of activities that involved a list of criteria and included activities in the kitchen, making choosing a fruit salad recipe, making the fruit salad, making cookies. And in all the activities she was standing. So we're working on her balance as well. And initially she did not anticipate any challenges. And before an activity, she would say she couldn't think of any strategies, she would just wing it. And we would just let the activity go. But through the activity, during the activity, we would say, you know, how can you be sure you're keeping track of everything you need to? And it would cause her to sort of stop and say, Oh, oh, I forgot about the list. Or, Oh, I didn't read the list, you know. So by Session 4, we started to see that at least at the end of the activity, she would say, Oh, I, you know, I forgot to review the list during the activity and did my own thing, you know. So she started to, the awareness started to emerge. But what was really interesting was that the awareness that emerged was very specific to the use of the list. So if you asked her if she had any memory or concentration problems, she would deny any problems in thinking. But during treatment, she realized that sometimes she wouldn't miss details on the list. She would forget to look at the list. But that awareness that emerged, it helped her use the list more effectively and therefore it improved performance. And towards the end of treatment by Session 7, she was initiating asking for a list in treatment and she was even coming in and creating her own lists. And by the end of treatment, she was asking for the list. She was using strategies and we were able to work with, she was in a day program. We were able to work with the day program and they were reduced her from 24 hours of assistance to 12 and then to 8 hours of resistance. So they reduced the level of assistance in independent living. And six months later I went back after the intervention. She was part of a case series and she remembered the activities we did. She remembered the list. She was still using lists and it was really great to see. And it was just amazing to me that she actually remembered the details of some of the activities that we did. We chose the first day, just like Aaron described, that we started out with therapist chosen activities and then we had her choose activities initially from a list and then initially on her own. And her goals started to change and emerge during treatment. So that was also really nice to see.

MATT:  
Oh, yeah, what a wonderful example and how awesome of an experience that is to see a client six years after the fact still with such great carry over.

JOAN:  
(AFFIRMATIVE). Exactly.

Matt:  
That's awesome. And then a testament to this approach as well. I just have two more questions for you both. The first being, what additional resources would you recommend to our listeners who want to learn more about what we've discussed today?

JOAN:  
Well, first of all, there's so many books, AOTA has some great resources. There's several books on cognition. There's the book on Cognition, Occupation and Participation Across the Lifespan that I co-edited with Noomi Katz. There is the book on Functional Cognition and Occupational Therapy that was co-edited by Tim Wolf, Gordon Giles and Dorothy Edwards. And then AOTA also has several online courses on functional cognition, including a whole functional cognition series of courses. I also have the website that I mentioned before that has a lot of resources both for assessment and treatment. And I do workshops and will be also launching a certification course, myself and Erin and other colleagues to provide advance training in this approach. So there's lots of resources that are out there.

ERIN:  
And our book.  
(CROSSTALK) Approach book, which is a comprehensive and very thorough guide, you know, the background, the development of the multi context approach as well as you know, all the specific components and lots of worksheets and tools to support implementation and to support learning how to implement the approach. And then to review and reflect on your implementation.

MATT:  
Absolutely. Thank you so much. We'll link those resources in the episode description. Which brings us now to the Golden Nugget segment, our conclusion of the interview. One final question. If you could tell practitioners and our listeners to do one thing, what would you say?

ERIN:  
So I think, you know, I'll do a broad thing and that's that we need to own functional cognition, OTs do. You know, there's a cadre of us academics really pushing the agenda forward, but it also requires clinicians to advocate for OTs critical role in this area. So that's my nugget.

JOAN:  
Well, I think that's really important because there are so many opportunities out there in this area. And so I think that's essential. But I'll be maybe more specific. I do think that in addition to all the resources we just talked about that are available, I think it's important to reflect on your practice, to look at what works, what doesn't work, to video your treatment sessions, analyze how you provide cues and take the time for yourself to practice some of the things that we talked about in terms of using mediated learning methods. I think that these are methods that can be very powerful and you can learn a lot from your clients as you use some of the questions and the guided prompts that I think it's sort of the learning becomes a two way street.

ERIN:  
I agree. And, you know, allow yourself to be vulnerable while learning. Reflect critically and honestly about yourself. Have your colleagues do that as well. You know, it's not easy, but it's definitely the best way to learn and just again, give yourself grace and that it takes time and it's a process.

JOAN:  
(AFFIRMATIVE)

MATT:  
And those are wonderful words. I know I'm feeling inspired and I'm sure our listeners are, too. I just want to thank you both again for taking the time to be on the show and sharing your knowledge and expertise. It's really been a pleasure.

JOAN:  
Well, thank you, Matt. Thank you for having us.

ERIN:  
Yeah, thanks, Matt. It's been fun.

SPEAKER:  
Thanks for listening to Everyday Evidence. Tune in next time for more evidence-based practice insights and applications.  
(MUSIC)