CIDDL Research and Practice Brief 9 Interview Transcript

Nicholas Hoekstra: hello, and welcome to the CIDDL research and practice brief series, my name is Nicholas Hoekstra. The purpose of the CIDDL research and practice brief series is to have conversations around the innovative use of technology in special education, Early childhood education, related services and leadership personnel preparation programs. Today we have with us Dr. Dave Edyburn, Senior Research Scientist and Professor Emeritus in the Rehabilitation Research Design and Disability, the R2D2 Center, at the University of Wisconsin Milwaukee and Associate Graduate Faculty in the Department of Learning Technology at the University of North Texas, as our guest lecturer. Our guest expert, excuse me, not guest lecturer. Dr Edyburn is going to discuss with us his research around special education technology, where it's been and where it's going, as well as the universal design for learning (UDL) framework. So welcome Dr Edyburn.

Dave Edyburn: Thanks Nick it's great to be here with you.

Nicholas Hoekstra: Well, to start out with, you've been a researcher in the area of assistive technology for something over two decades; could you begin by talking a little bit about some of the changes you've seen over the over the past 20 years?

Dave Edyburn: Oh sure, I think there's maybe two things I will point out about assistive technology and its development and the first is kind of a paradox, and over time we're more conscious of assistive technology. There's more technology in our world, in our daily lives and so using assistive technologies has become far more commonplace than it was a long time ago. But the flip side of that paradox is that while it's become more ubiquitous, we don't really see it. So when we see text completion and word prediction and text to speech and voice control, Those all started as, as core assistive technologies that were used by very few people, but they've evolved into a mainstream application and so some people kind of shake their heads; it's like "oh that's not assistive technology, because I use it." And So it's kind of an interesting paradox here that it's become more acceptable and ubiquitous at the same time and yet not everybody who needs it has access. And I guess the second thing is that, you know, over this period of time, one would think that we'd have a better knowledge base about the outcomes of assistive technology. And in my opinion it's really unfortunate that most of our profession is just described as procurement; is that we're so focused on getting you stuff and our knowledge base is not really growing in the ways that it needs to. Regarding that: what would benefits look like? what are the outcomes when I give you these new tools? and

how do we even begin to measure it and talk about it? So, anyway, kind of exciting, but also some reluctance here that we haven't evolved further.

Nicholas Hoekstra: Out of curiosity, you mentioned how technology has become so much more ubiquitous that people don't even realize sometimes. Sometimes that what they're dealing with is or is or can be assistive technology; do you think that that has had, at all, a negative impact on on the procurement side of assistive technology, that people, maybe are too accustomed to it so they're not even aware of its need.

Dave Edyburn: Perhaps, but, but I think the underlying issue is that does it help me? The kind of immediate abandonment is like, "if I try something and it doesn't seem to help, I let it go" but, but the notion that we adopt tools that support us in some way doesn't mean they're going to be on every minute of every day, you know. I know when to go use that tool and while I'm using it, it helps me do my job better, which may mean faster, it may mean better quality, it may mean less frustration, less effort. And so I think that, you know, all of technology is really a tool and then assistive technology got started by saying it's a tool only for people with disabilities and, and it's kind of a 1980s perspective of technology, that that the Federal definition of assistive technology has not really evolved, because it starts with AT is "any." So that it's like "okay, that's not really robust enough to say AT is anything," so it, so again, I think that's kind of the paradox that it becomes more acceptable but - it's, it's easier to see - but it's also not as clear about what the benefits are.

Nicholas Hoekstra: I see, Okay, well, I guess, on this note, as a field, how do you think we need to change or improve upon especially teacher education in order to support assistive technology. Yeah, teacher education has long been considered a barrier to technology use

Dave Edyburn: in the schools. And so, if if teacher educators don't model the use of technology to enhance teaching and learning, or provide meaningful experiences to explore innovative technologies, as well as how to integrate technology, the assumption is that future teachers will not be well prepared. And so one of the things that we can share later in the blog are some resources people might try to use to to kind of explode that notion of that "here are tools" and so again, a lot of people have been working on this issue for the past 20 years,, trying to figure out what it is we can do to help teacher education and it really kind of comes down to this notion of of Explanation of where it fits into my teaching repertoire, and then, what kind of tools that will be available, and then the integration strategies, because we know if teachers can't manage this in the classroom then they won't use it. So it's important nut to continue to work on cracking. And one of the points that you just made was that having the people educating teachers use it within their their classes as well. So it's not just

Nicholas Hoekstra: what I'm hearing is it's not just a tool for students with disabilities once they're in the classroom, we're also discussing, you know, teacher educators using these tools within their their teacher education programs. Yes, and and you know that as part of your Center. I mean, it's the primary focus your trying to help.

Dave Edyburn: University faculty understand where this fits because, for most of us, we may have gone to school in a period where this was not commonplace. So how do we, how do we find the tools? How do we understand where they fit? Certainly the pandemic has stressed all educators to say "Okay, how do we rethink instruction at a remote context?"

Nicholas Hoekstra : Right. Excellent. So one of the other topics that you that you've done a lot of research and a lot of writing about is the universal design for learning framework. 10 years ago, you wrote about whether UDL was just a fad and more recently published a follow up article to that article. Could you talk to us briefly about kind of the current state of UDL?

Dave Edyburn: Sure. Depending on how one marks the birth of UDL, I would call it about 25 years old and yet, in terms of human development, we would think that's a young adult just on their feet and life is good, but in the context of UDL, it's we still haven't figured out how to define it. It's been problematic as as I look at reviews of literature on UDL that, even though they all claim they're doing a literature review on UDL, they they come up with different articles. And so this is really problematic for the science and the evidence base of our work if we can't even agree on what kind of articles we should be retrieving and how we analyze those. Kathy Howery in her analysis of the literature points to five phases of the UDL life cycle over these 25 years and claims that the definition has shifted in each of these phases. And so this is really troublesome if we're trying to say this construct has has meaning and has a research base because we can't have it just shifting based on whatever is happening in society. Personally, I'm of the opinion UDL is is on track to become an educational fad. I was very worried about that when I wrote when UDL was about 10 years old, when I went back and looked after 20 years I've got some inconclusive evidence from Google trends but, but I did find a parallel between UDL and the 1980s initiative in special ed.called assertive discipline and, at least, using that kind of data, I saw parallels in terms of the kind of usage of the term and what it meant for long term adoption, which, you know, today we don't talk about assertive discipline at all. And so I believe UDL may be replaced by personalized learning, that personalized learning has, could achieve many of the functions we talk about with UDL, but, to its credit, it also deals with algorithms and performance data, and these are factors that UDL doesn't engage in because it's a framework it's a this or it's that i'm very worried that we've never established the scientific basis. And then over time we've lost sense of accessibility as a core function and we've gotten a misguided

understanding of who does UDL. Many proponents would argue it's a teacher responsibility, which is something I reject, thinking it belongs more properly further up the value stream in terms of publisher duties, in terms of those of us composing curriculum and putting it in containers that have certain attributes that are accessible or inaccessible. So while I'm hopeful about the future of UDL, I am looking backwards very concerned that we've we've not used our first 25 years well.

Nicholas Hoekstra: Well, so, I mean obviously at the CIDDL Center we tend to target our our work and our research towards the teacher, teacher faculty preparation. Is there anything that you think should be happening in preservice teacher training in in faculties of higher education around the country that will help help preserve and maintain and build upon the UDL framework?

Dave Edyburn: Yes, but I think it goes back to, you know, having a clear understanding of what the deal is and who's responsible for it. It's not clear that we can walk into a classroom and observe UDL because there's issues of intentionality that you did or didn't do something that I can't physically observe that may be a factor,. I believe we can analyze the the accessibility of curricula and learning activities to find out if there's inherent barriers. I think we can analyze the culture of the classroom to look at barriers: attitudinal, physical, sensory. So I think there's a number of issues and and all of these apply both at higher ED as well as K 12. I think, you know, if we talk about practical strategies, I guess, I would offer three, and then we'd share this responsibility between the teacher educator and the preservice teacher. But first, is that we have to learn more about the intent and purpose of UDL. So kind of understand where it came from in the context that students were being included in the general ed. curriculum in the classroom, but there were no changes, there were no adaptations to the curriculum. So they they gained access to the gated Community I call general ed., but nothing was different. It was like "well, they just let me in." So we've got to understand a little bit about that and what access means and, again, access is not just that You had the chance to learn, it's we've got to talk about that. And second, we really need to spend a lot more time looking at the accessibility control panels on every device. We've made tremendous strides at making the UDL concept ubiquitous that every device has accessibility panels there and we just need to explore with those our learning: when to turn them on, and why, and how we might use them, both personally as well as someone I know, which may be my parent, a sibling, a child. But, but again, not all those control panels need to be turned on for everyone, but that's why they're options. But, but it is a first line of Defense. If we understood learner diversity and the potential of embedded supports, and then, two, we turn on supports that are already there that most people don't even know, That That would be a great first two steps. And then the third is, I really think the issue of choice in UDL is about helping teachers make menus. And and I think about this as my job is to set

the Buffet. So the three bears: there's there's three chairs, there's three porridges, there's three beds. And so that before students come in, those all three are set up. But as the students come in, I want to challenge them to behave like goldilocks so that they try out each and determine what is just right. And that that Buffet is set, that's my teacher prep part. But the the choice, the outcome, is you have to figure out what the right combination of supports are. And I think those three concepts would do a lot to help teacher educators and preservice teachers begin to get a handle on how I go about implementing the theory of universal design in really practical ways that would make a difference for people.

Nicholas Hoekstra: Absolutely, yeah, it seems like that links kind of well back to what you were saying earlier around assistive technology and knowing ourselves how to use it; UDL framework ourselves kind of experiencing what that framework is like, in order that we can also then provide it to other people.

Dave Edyburn: Yes, yes. Nick, in my work, I talk about primary and secondary beneficiaries and the primary beneficiary is that person that I know needs this and I think about that. They inspire me. So that student that doesn't read at grade level, he struggles with every single class period, every day of the year. That, that's not going away: the inability to read at grade level. And, and so that's who my primary beneficiary is. I think about the things I bring in, the tools, and in the curriculum materials, but I also have to think about secondary beneficiaries, and those are people I don't know. And so, those are other students in the class that, you know, you have chlorine in your eyes from swimming this morning and so , you're not up to reading like you normally would. Or another student is visually impaired, so the intervention that I bought for that first student could also have implications for these others. And it strikes me if it is a universal design intervention, we're going to see more users out of those secondary beneficiaries. Because it has that universal application. If it only helps the one student I brought it into the class for, then I argue that's the definition of assistive technology. It's a, it's helping a person with a disability. But if the intervention has some wider application, then we should see another group also benefiting. And I think this helps us understand why we do this; yes, it's a lot of work, but I'm looking to help people that I didn't know - and they didn't know - they needed it, and trying it out, they're sampling it. But that universal benefit then says, "this was totally worth it." You know, I'm going to show all of you so that some of you use it, others will give it to others.

Nicholas Hoekstra: Makes perfect sense. I I like - I was reading one of your articles earlier last week - and I like the idea of this also having these secondary beneficiaries and looking at those those benefits for those individuals, because, you know, that makes these... that also takes a little bit of the stigmatism away from having only the primary users using a

particular technology or particular feature. And that's something that that can be isolating for a student, a primary beneficiary, a student with a disability that it's only them that that has access to this.

Dave Edyburn: Yeah, your observation's a good one, because I think that's why, you know, when I bring Braille to the classroom it's only for one blind student. The whole class will not use Braille; there's no benefit from that. But when I bring text to speech, it's going to help that struggling student not reading at grade level. But we've got to find out who else it's going to benefit and why. that, That's part of the universalness of that. So, to me, I think this is a really kind of a databased way for us to discuss what is assistive technology, only for some, versus universal design for many still whom I don't know, you know. And we have to discover that that's excellent. I like that, that connection there. Before we finish up, do you have any final, final thoughts, do you have any any dreams or any goals where you would like to see, kind of, the special education

Nicholas Hoekstra: field go from here, moving into the future? What are your what are your dreams for, for what we can do here, moving moving along?

Dave Edyburn: It is an interesting question. You know, a lot of my work is inspired by John Hattie who's a researcher out of New Zealand and and many people are familiar with his work called Visible Learning and what he's looking for is is Learning interventions that produce a very visible effect or outcome, and that it's really clear. That it's not just little differences, it's large differences. But what he suggests that really struck me was that all educators, we should approach student challenges as a research and development problem. And that means, when I do something today and I learned that it didn't work for you, I learned something and that's an outcome. But my homework tonight is to come back tomorrow with a new tool or a new option for you and then we're going to explore that together tomorrow. And it may not work tomorrow, which means I have homework again tomorrow night. But that we do that iteratively, day after day, until we find something that works, and that's the research and development. And I can be very candid with you to say, "You know, Nick, I don't know if this is gonna work but let's try this and we'll see." And so, so I really like that notion because what it means to me, our goal as special educators, is the question we're chasing, and maybe the one you're chasing for the Center, is what works for whom and under what conditions. And that, as as teacher educators, that it strikes me that in our job, my job, is is to build the encyclopedia of learning problems. Is that we should be understanding where students struggle and that we give that encyclopedia to preservice students, teachers as a framework. But it's their job now that they've got, you know, "here are the ways that I'm going to struggle to write or ah struggle to read." Their job is to fill that encyclopedia with interventions. So we need resources and strategies, tools, because they're going to meet students that have

those challenges. And yet, their personal and professional toolkit, and their professional knowledge base really has to be enriched by tools that our parents didn't have or that I didn't have as a student. And that that's the the ultimately the innovation we're talking about: are finding solutions to wicked problems. And as special educators, we know a lot about wicked problems because we see students, year after year, that that are unable to achieve these kind of learning outcomes or goals that we would like, or that students typically achieve. You know, things about reading at grade level or difficulty communicating or limited mobility or... Things like that. So, so it does strike me that, that as a profession, we have to think about our collective knowledge base of how do we move everything forward, how do we collect. So yes, there is some R&D at the classroom level, but we have to, we have to collect that knowledge, so that not everything is an experiment for every every child. And so that's My hope, is that with technology dissemination tools we should be providing our preservice teachers with a much different toolkit than we did 20 years ago.

Nicholas Hoekstra: Excellent I think that's a great way to to wrap up well, I want to thank you very much for your time for sharing your thoughts your your research in your experience with us today. For more information about the CIDDL research and practice briefs and other resources for higher education and related services, please go to ciddl.org. Don't forget to follow us on social media, subscribe to our channel and leave us a message. Thank you all very much for joining us, and thank you, Dr Edyburn for your time.

Dave Edyburn : Thank you.