

**FDEI:** Okay, thank you so much for being willing to do this. Today we have Dr. Natalie Danner here with us to talk about her research and her work currently and I'm going to ask if you would just provide our audience with a brief introduction of yourself.

**Dr. Danner:** Sure. My name is Natalie Danner and I'm at the University of Nebraska Kearney which is a teacher education institution and I am working currently as the Plambeck Endowed Chair of Montessori Education. I'm also the Montessori Teacher Education Director here and the practicum coordinator for teacher education students in the Montessori program. So, I'm overseeing the Montessori teacher education program here and also helping a little bit with our new lab school, which is called a Plambeck Center, which is also endowed by the same generous donor, LaVonne Plambeck, who is instrumental in Montessori here in Nebraska. I'm going to be working once we open the Montessori classrooms for young children in that building and supporting those teachers who are in those classrooms.

A little bit about my research, my background is as a Montessori teacher so that's my experience and I have my credential in three to six so that's ages three to six Montessori credential from the American Montessori Society. I spent seven years of my life teaching in that age group, preschoolers and kindergarteners, in Montessori settings. I also was a director for Montessori schools as well for part of my career and it's just an exciting part of my backgrounds because I always wanted to support Montessori teachers as they really thought about including children with disabilities. That influenced my research as well. My dissertation focused on inclusion in Montessori programs and I really focused on the public Montessori schools that are out there and how teachers in public Montessori schools were supporting those children with disabilities that were in their classrooms, specifically in early childhood, three four and five-year-old classrooms, that were multi-age. I continue to do that type of research here in Nebraska. I'm going to be working with a multidisciplinary team to look at different classrooms throughout the state including Montessori classrooms to see how they're doing in their quality of inclusion and how they're really supporting those children with disabilities in the inclusive classroom. It's an exciting project and I'm eager to see all the different classrooms in Nebraska and how they're doing here.

**FDEI:** Great! Thank you. So, the Montessori method we know is a unique approach to educating children from birth to 18. For those in the audience who might be unfamiliar with Montessori, could you briefly explain the foundations of the method particularly those that are relevant to early childhood professionals and why they're important?

**Dr. Danner:** So, we'll go over four different things that are important to Montessori. Those four things are: (1) multi-age education, and I'll come back to these as well and get a little bit more in depth with these, (2) hands-on materials, (3) a child centered approach, and (4) Montessori trained teachers.

So, the first one is multi age. What you'd see in an early childhood Montessori School is usually infants up through eighteen months or in a classroom together. So, it's multi age in that aspect. Toddlers would usually be 18 months through three years so multi age and then in the early

childhood classroom (sometimes it's called preschool sometimes it's called early childhood) it's three-year-olds, four-year-olds, five-year-olds, and those turning six years old all together in one classroom. That includes pre-k, it includes preschool, and it includes kindergarten as well. Which is different than many other preschool programs because usually in a Montessori school there is a three-year age span for most classrooms and what parents might not know is that there are Montessori schools above that continue on to elementary, middle, and high school.

Another thing that parents are often not familiar with is that there are public Montessori schools out there too - even at the early childhood level. So, definitely look in your area if you're interested in Montessori and seek out those opportunities to you. Maybe go visit a school and see what it's like because really the best way to understand Montessori is to see it in action. I can tell you a little bit about it but really the best influence really is seeing it happening.

The second part is hands-on materials and those of us in early childhood are going to say, "Hey, we all do hands-on materials, right? Oh, they play games...they do this..." It's a little bit different in Montessori in that Maria Montessori developed these materials a long time ago in the early 1900s. She developed these materials especially for the early childhood age group to have specific aims and purposes. Let's say in the Montessori math curriculum there are a variety of materials that are specifically designed to help children learn about concepts in math. Whether that's addition, whether that's 0 through 10 concepts, whether that's building larger and three-digit numbers, each of those different concepts is built into a specific material and the teachers that work with the children in those classrooms know all of the lessons to those particular materials. They can then help a child explore those materials and gain mastery of that concept. It's a little different. When you walk into a Montessori classroom you'll usually see a lot of wooden materials and say, "Hey, what are all those things?" They're common throughout all Montessori schools so no matter if you go to a Montessori School in India, if you go to a Montessori School in New York, or if you go to a Montessori School in Illinois, the materials are going to be very similar because Maria Montessori developed those. They are a part of the curriculum. The curriculum is really drawn out with those materials.

The third thing that I wanted to mention was that it's a child centered approach. What I mean by that, and most early childhood educators again are going to say, "Hey, we have a child centered approach." Yes, most early childhood centers do but when I say a child centered approach in this way it's that a lot of choice is integrated into this approach. If a child is very interested in perhaps dinosaurs they can explore the science area with dinosaurs and that can be integrated into all of the different materials in the classroom. Not only are they are interested in dinosaurs and exploring them and researching them more, but they're also getting lessons throughout the curriculum that have that integrated into them so they're not losing out in any way. Their interest area is really promoted in Montessori.

The other thing that's child centered about it is that children are permitted to move and make choices in the classroom. So even if they're kindergarteners they have that ability to choose. There are really individualized lessons that are given to each child either one-on-one or in small

groups and that differs very significantly than your typical kindergarten classroom where most lessons are probably a large group and if children are either falling behind or going ahead they can't because it's a whole group lesson. In a Montessori approach it's much more individualized with the lessons.

The final attribute of Montessori that's important is the attribute of a Montessori trained teacher. As a director of Montessori teacher education program, I prepare teachers who are ready to go out there who understand the curriculum very well, who understand how to individualize very well, and understand how to give each and every one of those lessons. When you have a high-fidelity Montessori school you're going to have Montessori trained teachers in it as well. So, if you're a parent you would definitely look for that training to make sure that the teacher is well versed in the Montessori curriculum.

**FDEI:** Great, thank you. It is very helpful to know those four foundations that you mentioned and to understand them as you described. Your doctoral dissertation focused on inclusion in Montessori context correct?

**Dr. Danner:** Yes.

**FDEI:** Okay so professors often will say that private schools don't necessarily do a good job of including young children with disabilities as do publicly funded preschools. But in the research that you did, you found that, the context of a Montessori classroom, and you wrote, "provided several unique and effective strategies for inclusion that went beyond the recommended practices including multi age classrooms and peer supports." You also wrote that you "observed teachers who were making" as you said, "minor accommodations and supports and teaming with other professionals and also implementing Universal Design for Learning." Can you describe those three strategies and how they can support inclusion?

**Dr. Danner:** Sure, so when we talk about multi age classrooms we're also talking about multi ability. When you have three-, four-, five-, and even six-year-olds in the classroom you can be sure that you have some of the children who are reading, some of them who are not yet reading, some of them who are very skilled in their physical and gross motor movement activities, some of them who are still kind of learning in those skill levels, some of them who are passionate about math and they're moving to that curriculum that's almost at the elementary level in math, and some that are just learning the beginning parts of number structure and sequence. Because of that wide variety in each level, there's that ability level difference too. So, when a child with a disability comes into the classroom and they may struggle with communicating or they may struggle with their gross motor movements - that's okay because not everyone is perfect in that classroom in every area. And because it's such an individualized curriculum, that's absolutely normal that they would be getting the lesson on something different than their friend at the same age level. It became a really home-like atmosphere. When you have a multi age classroom you almost have these older brothers and sisters in the classroom that kind of guide you along and help you because when it's multi-age in a Montessori classroom they stay together. It's not like they move on at the end of their three-

year-old year to another classroom. They stay with that teacher for three years. So, they know the foundation. They know the lessons. They know the routine of that classroom as they move up in age. They become those mentors for the younger children and also some of the children that may struggle a little bit in certain areas. One of the examples that always stands out to me, and this could be for a typical child or a child who has a disability, is a younger child in the classroom may still struggle with tying their shoes. Right? If you think of any three-year-old, tying shoes is a skill that is learned over time, right? And it takes some time to really understanding it. Oftentimes in a Montessori classroom that five- or six-year-old is going to be the one who's helping the three-year-olds so it doesn't always come from the teacher. The expert in the classroom can be a fellow student and the person who they can learn from easiest, and often best, can be a peer. If you think about it from a perspective of a family structure your older brother might have taught you how to ride a bike; whereas if your mom or your dad or another adult in your family might have tried to teach you how to how to do it but it was just a struggle, right? But when it's a child teaching a child, it's often very easy for the child to learn because they want to mimic the older child. They want to kind of grow up to be that older child. So, it becomes very motivating for them. That's what happens in the Montessori classroom - a child with a disability might come in struggling with a certain area and perhaps being at a certain level in the Montessori curriculum may be learning some of those basic concepts in language or literacy but in other areas might be far ahead and both of those things are celebrated in the classroom. They can be on a different curriculum level in math and literacy and that's totally fine because there are no group lessons. There's nothing that the teachers necessarily have to modify heavily because inclusion and individualization is the common denominator in the Montessori classroom. It's exciting to see that type of classroom and how well it really melds with inclusion and inclusion of specifically children with disabilities or delays and that's nice to see.

The other part of your question that you mentioned is that private schools might not do as good a job as public schools. Montessori can be both right? So, we know that there are public Montessori schools out there. There are publicly funded Montessori preschools out there, so it can be both. What I'm talking about is more so the Montessori trained teacher in the Montessori environment whether it's private or public either way it's really the same philosophy and the same curriculum. I believe they're doing really the same supports. The hard part about Montessori is that it is not a trademarked term and a lot of people don't know this. So, when Joey on the corner who has a gas station wants to open a Montessori School in his gas station, he can because it's not trademarked. He might have some other issues with Department of Health or whoever oversees the programs for early childhood schools. But there's no one coming after him from the Montessori "police" to say, "You can't be calling yourselves Montessori" because there's no trademark on it. Which is interesting and why it's really critical for families to think about those really important attributes that I talked about in the beginning- about Montessori trained teachers, the Montessori curriculum being hands-on, and all of those things too because often times it's up to families to see whether this is a high-fidelity Montessori school or if they're just using the name to get students and families into their program - which is kind of a another part of this whole thing.

But when we're talking about minor accommodations or support, teaming with other professionals, the Montessori teacher is really in many ways a jack-of-all-trades in the classroom, right? They have to be well-versed in many disciplines of the curriculum – math, literacy, geography, history, all of those different disciplines they have to be well-versed in. But when it comes to children with disabilities, we're talking about collaborating with people outside of the classroom. So, maybe a physical therapist, or an occupational therapist, or a speech and language provider, and all of those people are really important and critical on their IEP or IFSP team and the services are important to the child. So sometimes in some Montessori schools those providers and those specialists push into the Montessori classroom and collaborate directly with the teacher - which is great for carry over into the Montessori classroom. When a teacher gets to see how the physical therapist is working with the child, there can be lots more opportunities for that teacher to carry over some of those skills that the child is working on.

The other part that's exciting about that is when they push into the classroom they can ask a peer to come over and work with them on whatever skill they're focusing on. So, if they're working on sitting up and understanding that core strength skill, they can have another peer who's pretty skilled in that area demonstrate and show the child with disability how to do that which can be exciting too. That's teaming with other professionals, thinking about those multi-age classrooms, and the peer supports.

When we talk about the Universal Design for Learning it's really thinking about how do we learn in different ways and how do we demonstrate our learning in different ways. So, with these hands-on materials there's a lot of emphasis on both visual and tactile and sensory learning as a part of the curriculum that is very much a part of Universal Design for Learning. There are so many opportunities for the child to interact and to engage with the material. It's not just all verbal. It's not just all written. There are many ways for the child to interact with it and the same goes for how they express their learning. So, if a teacher is giving a lesson about red, yellow, and blue and they're learning those primary colors, the child can, at the end of the assessment portion of this lesson, when the teacher says, "Give me blue," they might pass them the blue card. But the child could also point to the blue card when the teacher says, "Show me blue." Or that child might say, "Blue," when they're pointing to blue. So, there are many different ways that they can show that they've learned the concept and all of those ways are really celebrated in Montessori. It's not just a handout that they're circling, you know, the color blue in there and that's the only way they can show that they've learned the skill. It's exciting to see how many different aspects of Montessori are really compatible with inclusion and that's what I found in some of my preliminary research.

**FDEI:** Yeah this is really interesting. You know I am not an expert in Montessori at all, and I don't know a whole lot about it. That piece about the trademark thing is fascinating right? And like you said families want to make sure that they're looking for those four foundational pillars to ensure that this isn't Joey on the corner who had a gas station, right? But the other thing that I'm finding amazing in listening to what you're sharing is that, you know my son, years ago when he first joined our family he was four and he had come from Ethiopia and spoke no

English. I put him in a Montessori preschool at that time to help him kind of learn English as well as other concepts and because that one had the space really it was the middle of the year. But I have always felt that it was such a good experience for him and now all that you're explaining this it is helping to me to understand exactly why that was just, kind of providentially, the exact right choice for him, you know? He spoke no English. He had no, what we here consider, formal education and early childhood education, right? And yet he thrived in that environment and so this is really helping me to understand why. This has been really great. I'm hoping that others find it valuable for them.

**Dr. Danner:** I mean the other part of Montessori is that it has a very international crowd. Montessori is really well known in Europe and is becoming much more well-known in Asia and in Africa too. I mean let's just say that the Arctic region may not have very many more schools but that may have to do with population level, right? [laughter] But in many areas in different countries you really are celebrating this approach because it really fits within many cultures, within many languages, and the concepts can be translated in many ways to other cultures and they have been successfully. One thing that I did want to mention was that when I was a teacher in New York City we had children all the time that would come to us from other countries who didn't speak a word of English and were learning English as they came but didn't know any when they entered the classroom. And the classroom was the greatest place for them because we were really a language rich environment that wasn't talking all the time. So, you may notice when you go into some preschool classrooms there's a lot of chatter and a lot of talking from the teacher. In a Montessori classroom it's different. It's not silent - I wouldn't say that. There are conversations that happen between children and between children and teachers but they're very purposeful. I'd say maybe the conversations between children may be more social - that's okay - but the ones between teachers and children are really purposeful in their use of language and their focus on particular term terms and vocabulary.

So, like I was talking about the red, yellow, blue lesson where they're just learning about the primary colors. It's not a lot of background conversation about, "Yeah, I love blue," or "Blue's my favorite color." That is all chatter about blue. Instead it's really focusing on the child taking their eyes and their hands to hold that blue tablet, look at the blue tablet, say the word blue with the teacher, and then physically look in their environment to say see if there's something else in their environment that could match it without all of the words that I'm saying right now. The teacher may only say the word blue and use it to be very purposeful about what they're looking at. There's that joint attention and it's not so much the background noise of conversation. It's very critical for teachers to understand that so it's not a constant flow of language happening. But that it's very purposeful. I wanted to make that mention just because that's really important for children who are learning the language to really have a model who's focused on the vocabulary that they need to know but also having models from peers that are really conversant and like to have lots of conversations with their peers.

**FDEI:** You know we later came to find out that my son had visual processing, auditory processing, and language processing disorders and we didn't know that at the time and colors happen to be one of the things that he just could not wrap his head around. And you know he

did grow so much in that experience being in that classroom and I remember going in sometimes to pick him up or whatever and I would see him - just his whole countenance kind of changed because, I think from what you're explaining, he didn't feel the pressure to understand everything that was being said to him because the approach wasn't always so intensely verbal the way - you know my daughter was in a different preschool - in a more traditional preschool where it was structured there. This is very fascinating. You mentioned in your research that classroom teachers you observed selected and planned for the visual needs and guided children towards specific Montessori materials on their level. Can you provide kind of an example of a typical Montessori material and what one might observe if this was happening with a young child with a disability? - the teachers selecting and guiding in that way?

**Dr. Danner:** Sure, so the one material that I feel like is the classic Montessori material, and you might remember this from your child's classroom, is the pink tower. Do you remember this one?

**FDEI:** Yes, yes!

**Dr. Danner:** So, the pink tower is basically ten different blocks of different sizes going from this size [large gesture] all the way to the tiniest cube. They're all cubes and they're all different sizes just a little bit. The lesson that the teacher teaches is really to mix them all up and then help the child build the tower from largest cube all the way to smallest cube. That works really well and it's a classic lesson that's given with most of the newer children who are about age three who are coming into the classroom. It integrates a lot of that gross motor movement. They have to go to the shelf pick up that large block, bring it to the floor where they're doing their work on the mat, and put it down. Then go back to the shelf, get another one. There's a lot of gross motor movement and engagement for that young child because, you know, they like to be active and so they build that pink tower. The teacher first models it and then the child helps by building the next one. There are ways to make it more complex, where I said mixing all of the cubes is one way to make it more complex. But there are also ways to make it more simplified for the child that needs that.

So, perhaps if there's a child who has a physical disability that for them perhaps getting from a sitting position to a standing position, moving about the classroom to bring the material over back and forth again - that works very well for your typically developing three-year-old - but you might select only five of those cubes maybe the smaller ones that can be used at a table. So, mixing those cubes and finding the ones that are the one that's the largest and then moving up, so that the child doesn't have to move around the classroom or transfer their position up and down all the time but they still have the concept of learning which one is biggest which one is smallest and arranging them in sequence. The skill level is still there it's just modified in a very slight way for a child and that has really been all the difference that the teachers are making. They know the traditional way to present the material is this way, but we know the skill level of this child and we know what they struggle with and we know what they're really good at, and how can we modify this material in a really minor way for it to still have the same concept but the child can be successful with it? That's critical because we want the child to be successful

and learning the skill or concept that's really embedded in the material. You can do it both ways. You can view it on the floor with all ten cubes. You can do it seated at a table with five cubes. And you're really learning that same concept. That's an example I would give of a really classic Montessori material that can be slightly adapted but really teaching the same concept for a child with and without disabilities.

**FDEI:** Thank you. That's helpful. One of the other key parts of the Montessori method is independent learning, right? Sometimes there are children with disabilities who need a lot of support and are not very independent. What could Montessori teachers do or what have you seen them do that provides those accommodations while still remaining true to that idea of learning independently?

**Dr. Danner:** I think it's really about thinking of independence as a goal and it's not something that happens immediately even for a child without disabilities. If you think about that three-year-old, they're not going to be a hundred percent independent when they enter the classroom. It's something that's learned and for a child with disabilities who perhaps needs a lot of support, it's something that really is thought of with all of the support system that surrounds that child. So, I would say the most important thing to do is to sit around a table with all of the adults who support that child and really think about how can that child make choices, how can this child really support their interests, and how can this child do things on their own to the best of their ability. You'd be surprised at what you can come up with when you have a group of adults, including the parents of course, in the family and thinking about thinking through how can they do that because you can come up with some pretty creative ideas.

For example, there may be a child in the classroom with a disability who is using a visual schedule, right? So, they're thinking about week one in the classroom and there's a picture of the child coming in the classroom and then they know they need to hang up their coat and then they know that it may be time for breakfast or whatever. The schedule is in the classroom. They can see what's going on but maybe when there's an opportunity for the child, where the rest of the class is choosing materials, you can put two different options on that schedule for the child and say, "Would you like to do the pink tower or would you like to do reading the book?" So, that the child can make a choice at that point even though it looks a little bit different than the child making a choice without a disability whereas they are going to physically just go to that material and choose it right off the shelf. This child is communicating in a different way and is showing by pointing to the picture, "This is what I want to do." But yet they're still independent and making choices. I do think that's what's most important for young children with or without disabilities is that their choices are valued and respected by adults and that they're learning that they have a say in their curriculum as well and in what their interests are as well. That's just kind of one of the different parts that can be adapted in a way with a goal of becoming gradually more and more independent but not in a way where they're doing things alone but making choices and making their thoughts heard by other people.

**FDEI:** Yeah, so if I'm hearing you correctly, it's also about taking this principle of independent learning that's valued in the Montessori method and then melding it with this notion of



individualizing the child's education and that you can individualize independent learning for children as well?

**Dr. Danner:** Yeah.

**FDEI:** That's great. You've talked about multi age classrooms provide natural peer supports and you know that we know that welcoming behavior within a classroom context, you mentioned, it's been supported in the research and especially in special education literature on friendships. Can you help explain what both of those concepts mean for members of the audience who might be not familiar with them?

**Dr. Danner:** Sure, so the natural peer supports part - I think I got into that a little bit earlier when we were talking about multi age, multi ability classrooms. But also thinking about how its natural. It's just like a family atmosphere, right? So, you've got those older kids in the classroom, you've got those younger ones, and the older ones just naturally help the younger ones. But then there are also those children in the classroom who might be those helpers, you know, the four-year-olds who really want to help out and be that assistant teacher in the classroom almost. And you can give that type of job to a four-year-old absolutely! So, give them that leadership skill that's in the classroom to support their peers. That kind of community that they've built in the multi age classroom is so important to think about. Who in our classroom need some help? And it's not seen as a negative. It's seen as, "Wow, I have this skill and I can teach someone else about this. Oh, my goodness! I feel so helpful! I feel like such a strong part of my community." And that's why older children, or maybe more experienced children, or children who are further along in the curriculum- however you want to describe it - can be those models and those natural peer supports to other children. And when you're seen as a community, as a cohesive whole, you're seen as a part of it. Whether that means that you need a little bit more support in math or you need a little bit more physical support in the classroom, that's normal because you're a part of that group. And the children in the group know what the other children need so and that's the part where the teacher really has to be focused on thinking about, "How can I describe this in a way where it can be positive for other children but also carry a sense of responsibility and almost honor for the peer to be supporting another peer in the classroom?" And it really is an honorable role for that child.

I remember there was a child in the early childhood classroom the Montessori classroom that I was observing, and she had some physical disability. She had some trouble getting up from a sitting position to a standing position and she used some supportive devices to do that, but she usually had an adult to help her do that. But in this case, there was a kindergartner who loved to sit by her and loved to help in any way that she could. So, the physical therapist actually came in and actually showed how to provide physical supports to this child. This child was like, "Wow! This is going to be great!" You could almost see a future physical therapist in this child which is so exciting to see in a classroom because not only are they proud of supporting their family or their community but they're also gaining skills too. If you're thinking about the different ways of transferring, there's a whole skill level in physical therapy, let me tell you. But if a child is learning that, then they start getting interested in how can I support this child in a

different way and they start building their relationship together a little bit more and they start having shared interests, shared activities, and that builds on that friendship and develops that friendship. Because we know when children are separate and when children are in the back of the room with their special education teacher, they're removed from those friendships and those natural opportunities for support in the classroom. When you have the peer supports that are coming in there and providing the specialized support for a child, that's a really great opportunity for building community and building those friendships.

So, when we talk about welcoming behavior that's supported by research in special education and in friendships, we're talking about that community and we're talking about building that community and most of the research that's been on friendships and special education has been in single age classrooms. It's shown that children who are taught how to be those peer supports and are guided by an adult on how to do this well, really help that child with disabilities feel more a part of that class. But what I'm saying is when you have a multi age classroom that comes much more naturally to the child who wants to provide help or support and it comes oftentimes without the adult support to train them to be a peer support because they want to be helpful they want to be useful in the classroom and that's just seen as another part of being helpful and useful in the classroom. It's exciting because those third-year students that we talked about, mostly the kindergarteners, that's a part where they solidify all of their learning for the past two years and that's part of how you solidify learning. We know about this from adult learning research. We know about this from children's learning research. Teaching others - when you have the opportunity to teach someone, else you learn that concept and it's solidified in your mind all the more strongly. That's an opportunity that really is seldom given to children and is a very strong part of that multi-age classroom, honestly. So that's just a little bit about friendships and peer supports and multi-age altogether.

**FDEI:** Wow! Well thank you. This has been really, really fascinating it's making me wish I could turn back the clock and put all my children through Montessori. I was very drawn to it but where we lived there wasn't a public Montessori and so I looked at my four small children and thought, "I would have to sell something like pretty significant to be able to do that." But that's good to know for those that don't know that there are public Montessori options in some places. Thank you again so much for all the work that you've done in this area and for sharing that with us today. If our listeners have any questions, they could email us or post a comment and then I can reach out to you and perhaps get an answer. Thank you again so much for being here.

**Dr. Danner:** Yes. Thank you so much.