

## Creating Playful Learning Environments for Infants and Toddlers

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Allie Canavan: Hello, and welcome to "Research on the Go," a podcast that digs into the latest research in the field of child development and explores the ways this research can be used to help infants and toddlers learn and thrive. My name is Allie Canavan, and today, I'm talking to Dawson Nichols.

Dawson Nichols: Hi. Allie and I are from the National Center on Early Childhood Development, Teaching, and Learning, and we are both based at the Institute for Learning & Brain Sciences at the University of Washington here in Seattle.

Allie: A few months ago ... Well, I guess it was more like, I don't know, half a year ago.

Dawson: It has been many months, yes.

[Laughter]

Allie: OK. Many months ago, we started to look into the latest research on playful learning environments for infants and toddlers. And Dawson led that investigation, and he's going to share some of his exciting findings with us.

Dawson: Yeah, there has been some exciting new research done on play. But in addition to talking about the research, I want to talk about ways people can incorporate these ideas into work with programs. This is interesting stuff, but it's useful, too, and I think it can really help our on-the-ground work.

Allie: Excellent. Now, before we started recording, you said that researchers are actually defining play differently. It's kind of surprising. Children have been playing for thousands of years, and you'd think we'd have a pretty good definition by now.

Dawson: Well, yeah. OK, I see what you mean. But play is even older than that.

Allie: Because people have always played?

Dawson: Yes, but play is older than people, too. Animals have been playing for millions of years [Laughter]. Yeah, even today we see all sorts of animals playing – birds, dolphins, octopuses.

Allie: [Laughs] Oh, that's absolutely true. I have definitely gone down a few YouTube rabbit holes watching all kinds of animals play. But why? I guess the question is, why do they do that?

Dawson: Well, play researchers are learning that play is really ...

Allie: Sorry, sorry, sorry – sorry to interrupt, but can I just say, "play researcher"? That's a job I could do.

Dawson: I know. Sign me up. Yeah. But to be fair, it's more than just studying "fun," because play is a lot more than fun. Play is one of the most efficient ways animals have of learning about themselves and their environments. It's why it is a drive for so many animals – all mammals.

Allie: All mammals play?

Dawson: All of them, every one. It's part of our common evolutionary heritage.

Allie: OK. I've studied evolution, and I know that if something has persisted that long, it must give some kind of benefit. A behavior that expended a lot of energy and didn't provide some benefit wouldn't last.

Dawson: And play has huge benefits. Play is learning. Play is practice.

Allie: Is that the new definition?

Dawson: Well, no. [Chuckles] It's more of a description. Play provides a safe and enjoyable environment in which we can build skills. You can think of it as a kind of practice, but not all practice is play.

Allie: OK, so then, what is the new definition?

Dawson: Good. Yes. OK. When we talk about play, we all recognize that as a term it covers a lot, which is why researchers are now talking about play as a continuum of activities. And because it covers so much, our definition of play identifies characteristics. If any activity has these characteristics, we consider it play.

Allie: What are those characteristics?

Dawson: Alright, you want to guess? There are three.

Allie: OK. I'm going to be disappointed if fun isn't one of them.

Dawson: It is, but play researchers call it positive affect. Because a lot of play involves outward happiness, the kind of smiling and laughing that you think of when you say fun, but some play involves intense concentration. It's still enjoyable, but it's a different kind of pleasure, so we use the term positive affect to capture both of those.

Allie: I was with a toddler the other day, and he was concentrating so hard on stacking blocks. He was so intent on what he was up to.

Dawson: Exactly. It's not happy, smiley play; it's focused and concentrated play. Still play, though. And we should be aware that different cultures, they play differently, so the balance of concentrated play and laughing-out-loud kinds of play, that will be different, too. Play is really diverse, and it looks different with different children, so that's OK.

Allie: Alright. OK. We've got two more characteristics. If I'm playing and I'm enjoying it and ... Well, OK, so I get to make my own choices, right? Is choice one?

Dawson: It is. In order for an activity to be play, it needs to be flexible and adaptable enough so that the player has some choice. They should have the choice of whether or not to play at all, too. It's not play if you're forced to take part.

Allie: OK, hang on. I love introducing toddlers to board games, particularly because they have rules, and a lot of toddlers are ready for that. Are you telling me that playing games isn't play?

Dawson: No – no. Playing games is absolutely play. And this is an important point. A lot of play has rules, but within the rules, there's flexibility so that the player has the freedom to make choices. Some choice. It's not anything-goes.

Allie: Got it – got it. OK. Let me go for the third. Play has positive affect, play provides choice, and play ... I don't know.

Dawson: Researchers have found that an important aspect of play is that from the point of view of the person engaging in the play, it's done for its own sake. This is sometimes called intrinsic motivation, and it means that there is no goal outside of the play itself. For example, the other day, I was with a child learning how to use her spoon. She was sitting in her high chair with her bowl of – I think it was both oatmeal and applesauce mixed up together.

And she had – no, it's pretty good –and she had her spoon in her little fist, and she was working hard. She was steering the spoon to the bowl, sawing at the food, finally getting a spoonful, lifting it to her mouth. She was definitely working on some skills, but she was working. She wasn't playing; she was getting something done. She was eating. A few minutes later, though, she had had enough to eat, but she was still using her spoon. She was lifting it, banging it, twisting it, tasting it. She was playing with it. It was the same kind of activity, but now she wasn't trying to get something done, she was just exploring how we use a spoon, learning how it works.

Allie: Ah, yeah, that's classic messy play, exploring those weird textures and different shapes.

Dawson: Yes, so much fun.

Allie: And totally universal. All children explore their food that way.

Dawson: Well, exactly, and that's where context comes in because the eating isn't play. That's work. But the tools and materials, they are inherently interesting, so the child continues the activity after the work part is done. And then when there is no goal beyond that exploration,

well, the child is figuring out how things feel and how they work, and that's when the activity has become play.

Allie: Essentially, the same activity can be play in one context and not play in another context.

Dawson: Ding ding ding ding ding! [Laughs] Exactly. Play is that way. It depends on context.

Allie: But how is that different from saying it's fun?

Dawson: This is where I think it's important to remember about positive affect. I think she was more like that child that you were talking about earlier with the blocks, just really focused. That kind of focus is satisfying to a child, but it may not be smiley, laughing fun. It's that concentrated kind of play.

Allie: Got it – got it. Stacking blocks with concentration like that isn't laughing fun, but it does have all the aspects of play. One, it's done because the child wants to do it. Two, the child has a positive affect. And three, the activity provides flexibility so that the child has choice.

Dawson: You got it. Yeah. And if that seems too clunky, it's OK to use a simpler definition, too. Play is a fun and flexible activity a child chooses to do because they want to.

Allie: I like that – I like that. But it's going to cover a lot of activities.

Dawson: Yeah. Let's talk about this continuum of play. Researchers have found that the main things that distinguish different kinds of play are who starts the play - the child or the adult - and who directs the play as it's going along. The continuum of play tracks these two things. And on one side of the continuum, there's free play, where the child both starts and directs the activity. On the other side of the continuum, the adult is doing both of those things.

Allie: Can you give some examples?

Dawson: Sure. Let's start with the adult being in control of both starting and directing the activity. I think of the toddler dance classes I went to with my daughters when they were that age – oh, if I could go back. Anyway, they absolutely loved it, but they didn't start it and they didn't direct it. They followed directions the entire time.

Allie: OK, that seems almost like cheating. It's a class, not play, right?

Dawson: Well, it was playful, and that's why they loved it. But you're right. When the child isn't in control, it can be less motivating for them, and that's why this kind of play is all the way on one side of the continuum. Now, on the other side is where the child decides when and how to play. This is free play, like what a child does on the playground. A lot of great learning happens during free play - physical and sensory skills, social skills. But play researchers think that in structured learning environments, the sweet spot is in the middle of the continuum, and we call this area guided play.

Allie: Guided play.

Dawson: It's when the activity is organized and initiated by the adult, but the child gets to direct the play. It maximizes the child's enthusiasm because they get to decide how to play, but it maximizes learning because the adult structures the play around a learning goal.

Allie: It makes sense to me that it's good to let the child direct things as they like so that they have some agency and get to express their own interests and creativity. But why the focus on guided play?

Dawson: OK. Well, first, it's not either/or, right? We love free play, and children learn a lot during free play. But researchers today are emphasizing guided play because it helps direct the child's learning. Guided play is meaningful and engaging to the child, and there is an adult there to structure the activity beforehand and then gently guide and help the child. They can scaffold the learning so that it builds on previous knowledge and skills. They can help the child focus and keep distractions to a minimum so that the activity goes longer and more learning happens. They can adjust materials or bring in peers when appropriate. For example, if children are playing with blocks, a teacher might bring hard hats and block tower building plans over to the free-play area. And these materials can encourage the children to more actively engage with their imaginations as they build with these blocks. They play longer, and they deepen their play, deepen their learning.

Allie: It's not really that more learning is happening during guided play; it's just that it's more organized learning.

Dawson: I think that's fair. Again, we want all kinds of play. They all help. But researchers are finding more and more that incorporating guided play really contributes to ongoing development.

Allie: This makes a lot of sense to me now, and I see what you're saying about free play. I've been doing some research around physical development, and there's definitely a sequence to it. I see situations all the time where a child wants to engage in an activity during free play, but they're just not ready yet, and they get so frustrated.

With guided play, an adult can set up the activity so that it's appropriate for that child's stage of development, and then that avoids the frustration and allows the child to really learn during the play. It can be something as simple as, I don't know, having the right size scoopers in the water-play area.

Dawson: Yes, and that's especially important for children with disabilities or suspected delays. A child may not be able to pour, but they may be able to squeeze water out of a sponge, for example. So having a sponge available can allow that child to really enjoy that play activity.

Allie: Yeah, and also get all the benefits from the sensory play and measuring and practice with coordination, that kind of thing. This is where planning ahead and a good curriculum with those

kinds of options can be really – really helpful. And by the way, if programs need help selecting a curriculum, the Curriculum Consumer Report on ECLKC is an absolutely fantastic resource.

Dawson: It is. And you know, since we're mentioning resources, let's not forget the Early Learning Outcomes Framework – the ELOF. It is such a great tool.

Allie: And it's also available on the ECLKC and the mobile app, ELOF2GO.

Dawson: ELOF is a great help for a guiding adult to support development. It lays everything out so clearly. I think of the Approaches to Learning domain, which is about how children learn. Play provides so many opportunities to develop in this area, to learn how to learn.

Allie: It really does.

Dawson: And a guiding adult can really harness the enthusiasm of play to maximize that learning.

Allie: I'm still absolutely a fan of free play, but I totally see what you're saying about guided play. [Laughter]

Dawson: I'm with you – I'm with you. We want both.

Allie: Agreed. Can you be a little bit more specific about guiding? Most of the guiding happens as the play is actively happening, right? I think an example or two might help.

Dawson: Yeah, definitely. And hopefully, this will show that guiding helps the learning, but it also can help the play last longer so that even more learning can happen. For example, if you're water painting on cement.

Allie: Oh, I love that activity! Little footprints and little handprints.

Dawson: Yeah. So cute. For an infant, the guiding might be something as simple as helping the child get the paintbrush or the sponge wet. They may not be able to manage the bucket of water yet, but they'll still get a lot out of the water painting. The guiding may make the activity possible. For an older child who can manage their paintbrush, guiding could just be playing alongside the child and talking about what they're doing. That's a great support for language development. And also, it could be especially helpful for children who are dual language learners. You know, labeling the object that a child is playing with helps them learn the name because they're actively playing with it, so it's immediate, and it's meaningful to them.

Allie: What if - what if it's a group of kids?

Dawson: In that case, guiding might look like steering children to different spots so their drips don't get on other children's water paintings, right? Avoiding difficulties like that can help the activity go on much longer and without frustration. Or we can help children take turns. "Line up with your cup, and you can scoop your water out of this big bucket." It is not easy for little kids

to wait their turns. But, you know, a fun activity like this is a great time to get them motivated to learn those skills - patience, self-control. The fun motivates the learning.

Allie: Absolutely – absolutely. And you know, I said I was doing research on physical development, and this mirrors that again. Physical play is one of the most effective ways that infants and toddlers learn, but they do need help.

Dawson: They do.

Allie: And helping them reach for things, balance things, manipulate things, it can really keep them interested and totally assist their learning. There's a lot of research that shows that children who are allowed to do physical activities that interest them, that they learn more quickly. And infants need that guiding adult to help maintain that interest.

Dawson: Yes, absolutely. And ... OK, I've been dying to share this with you. Can I geek out for just a second here?

Allie: You haven't been already?

Dawson: Ah-ha-ha, OK – OK. We've done a lot of research at I-LABS about how social learning is. Children learn best in social situations.

Allie: Yes.

Dawson: Well, there's research now that indicates that the presence of an attentive adult, one that isn't even interacting, improves learning.

Allie: OK. So just the adult being there improves learning?

Dawson: Being there and being attentive.

Allie: Please explain.

Dawson: People are social learners from the very first, and when you attend to a child, even if it's just watching what they're doing, you engage them in a social situation. Even infants recognize that when a caring adult is paying attention to them, well, it assures them that they're safe and comfortable and it's OK to explore. This study was really interesting. They invited 12-month-old children to play in the presence of a familiar adult, and they measured how the child played - how much they explored the space, how much they persisted in play, the depth of their concentration, things like that. But here's the thing. With some children, they asked the adult to be attentive to the child. They didn't encourage the child to play or direct them in any way. They were simply attentive. With other children, the adults were asked to read a magazine, and the magazine was held in such a way that the child could not see the adult's face.

Allie: Oh, OK! So there was no negative contact with the child. The familiar adult was just there, just inattentive.

Dawson: Right.

Allie: Nice.

Dawson: I know. And what happened? Children consistently played more when the adult was attentive. Again, it was not because the adult was helping them play. The adult wasn't even encouraging them to play. But by simply being attentive, the adult's presence meant that the children played more. They persisted longer, they explored the space more, they learned more.

Allie: That's a great study that reinforces what we've been finding at I-LABS, too, that even the youngest children are really clued-in to whether or not adults are paying attention to them. That simply cue let's the child know, "I'm here with you, I'm responding to you, and it's time to explore and to learn."

Dawson: Yeah, and a child doesn't get that cue from an inattentive adult.

Allie: It also reinforces that the most important thing in any child's learning environment is the adult. We want to give the child our attention. And that's the right phrase, too, isn't it? We give attention. Attention is a gift.

Dawson: Oh, yeah, I like that. And it's so true. It really is a gift. It's one of the best things you can give to a child.

Allie: Effective guiding begins with being attentive. What else can we do?

Dawson: Well, I think we can use our attention to recognize how different each child is and that they will need different things. If you take the time to learn what an individual child likes, you can offer them activities that will naturally engage them. It makes the guiding much easier.

Allie: You know, I hate to keep bringing this back to physical development, but this reminds me of working with children with disabilities or suspected delays. They can often benefit from slight adjustments to an activity. If children are, say, crawling over some cushions, you know, lowering the barriers or providing smaller cushions may help children enjoy it more and get more out of it.

Dawson: No, that's a great example. But whatever their ability, every child is unique, with their own interests. Getting to know the individual child is really – really helpful. And it isn't just what they like; it's also how they play.

Allie: And children definitely have different ways of playing.

Dawson: Oh, they do. Some may need encouragement to simply get started. Others may need help focusing.



Allie: As we've been talking, I realize I've had preschoolers on my mind. Does this apply to infants, too?

Dawson: What do you mean?

Allie: Well, preschoolers definitely have different interests. You know, some like dolls, some don't, some like stacking things, some prefer the sand table, and some don't want to go anywhere near the sand table. But infants are learning basic motor skills and sensory stuff. Do they really have preferences?

Dawson: Oh, gosh, yes. Yeah, there was a recent longitudinal study, actually, that really drove this idea home. They tracked the play of dozens of infants at different stages, and they found that even 10-month-old infants showed distinct preferences in their play. When they were given the opportunity to play with preferred toys, they played longer, and their play was more complex.

Allie: Ten months?! Wow.

Dawson: Yeah – yeah. And it underscores how important it is to attend to the interests even of infants. They do have preferences. And if an adult can guide their play to help them pursue those interests, it will help them play longer and more effectively.

Allie: And play is learning.

Dawson: Play is learning, yes.

Allie: Effective guiding means attending to the child's interests and facilitating the play. What else can we do?

Dawson: Offer a variety of activities. Research shows that playing with different materials and new activities, it extends play and enhances learning. Now, we don't want to overwhelm a child with too many options at one time, but an effective practice here can be to rotate objects and activities. Variety is the spice of life, as they say, and over time, it will keep play interesting for children.

Allie: Although, I know some children who really enjoy doing the same activity over and over again. It's comforting.

Dawson: Yes, yes, yes. That's a great point. Children enjoy mastering things and feeling competent when they're doing things that they already know how to do. I'm not saying that a child should have new activities every day, not at all. Familiar activities are important, too. Children need both. And you can combine them. You can always look for opportunities to add new twists to favorite activities. If a child loves stacking cups, try providing blocks and allowing the child to stack those. Then you get sort of the benefits of both.

Allie: Absolutely. Yeah, that's totally true. And I'm also noticing that we are pushing up against our time. Is there anything else that you'd like to share before we go?

Dawson: I guess the last thing that I would like to say is that play is unpredictable. [Chuckles] We all know it, but it's true. And in guided play, we let the child direct the activity as much as possible. That means, of course, that you can plan for the play, but you cannot plan the play. The play is up to the child, and you are there to help them pursue their interests. This means that you need to be flexible. You need to be on your toes, and you need to be ready to pivot.

Allie: Right – right. You know, I recently saw a situation where some children were playing at a sensory table filled with sand. One child kept putting sand in his pocket. And at first, the caregiver told him not to. You know, "That's not how we play with sand." But the child got upset, so the caregiver kind of slowed down and asked him what he was doing. And, well, it turned out that he wanted to share some sand with his sister at home.

Dawson: Aww, that's sweet!

Allie: Isn't it? And once the caregiver realized this, she just went with it. She got a little bag for him so that he could take some sand home, and then of course some of the other kids wanted to take some home, too. So it became this whole new activity, but it was an activity with a purpose.

Dawson: Yeah – yeah, and it grew right out of the play. That's great.

Allie: Exactly. And what I really like about it is how it connects the play with the children's home experiences. It makes it that much more meaningful for them.

Dawson: And probably extends the play, if they all went home with a little sand to play with.

Allie: Yeah. I mean, it was an excellent pivot, and pivots like that happen all day long for caregivers.

Dawson: [Laughs] Hundreds of times a day, which is why adults need to be flexible and they need to be ready to pivot.

Allie: Absolutely. And I hope we're not making this sound too burdensome, because honestly, the surprises are one of the things that I personally like best about working with children. They really are surprising, and you never know what they're going to do. [Chuckles] It's almost always something that you don't expect, but I think that that's fun. I love taking it as it comes and just rolling with the wackiness.

Dawson: I completely agree. And the more we can laugh and play along ...

Allie: While attending to their interests and guiding and pivoting ...

Dawson: Yes, but the more we can enjoy the work, the better we will be at it.

Allie: And children recognize that, too.

Dawson: Joy?

Allie: Absolutely.

Dawson: Absolutely. So play with children and enjoy.

[Laughter]

Allie: Ah, excellent. Well, I think we're out of time, so let me just pivot to the closing.

Dawson: Oh, that's a groaner. OK, good. Nice.

Allie: [Laughter] Well, thank you so much, Dawson. For more information on playful learning environments and other resources you can use with programs and families, visit the ECLKC website and search for "play." You can also find other podcasts like this one there. Thank you so much for listening, and bye for now.

Dawson: Bye!

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