



Transcript for the video:
TIMPANI Toy Study 2019

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Jeffrey Trawick-Smith, Co-Investigator: We study toys in our center because they are a fundamental part of children’s play, which is so important for development. Toys, in a way, are a research tool that allow us to kind of peer into children’s young developing brains to see what’s going on in there. We can use them as researchers to look at early growth and development.

Julia DeLapp, Co-Investigator: For the past ten years, we’ve been conducting the TIMPANI Toy Study – toys that inspire mindful play and nurture the imagination.

Study Methods

Julia DeLapp: This year we selected ten toys that represent the broad array of different types of play materials you find in a preschool classroom. So we had construction play toys, replica play toys, toys with loose parts, water play toys, music play, and pretend play toys. And then we had three students carry out the work of videotaping and coding footage of children playing with those toys.

Allison Lundy, Undergraduate Student Researcher: Every two weeks, teachers would get a toy. There were a total of ten toys, and they rotated through each of the four classrooms. And once a week, we would record children playing with the toy. After collecting that footage, we would code it. We were using an instrument that looks at the impact toys have on children’s play.

Alyssa Barry, Undergraduate Student Researcher: So there's four different categories. We score them from one to five, five being the highest rate of play, and one being the lowest. And we score their highest moments of play within that five-minute block, and you were only watching one child at a time.

Sayantani Nandy, Graduate Student Researcher: We have codes for each and every child in the room that plays with the toy. We try to see their results, like which toy scores the most among those four broad categories.

Category #1: Thinking & Learning

Allison Lundy: For thinking and learning, we were mostly looking at children's thought processes with the toys.

Sayantani Nandy: The kind of play they are doing with the toys, how it is helping them to think about it.

Alyssa Barry: How they explored the toy; was there problem-solving? Did they really try to figure it out? Were they asking questions?

Sayantani Nandy: The highest scoring toy in thinking and learning is the waffle blocks.

Allison Lundy: Waffle blocks are these square pieces; they look like waffles. But some of the pieces are curved; there were some that were triangular.

Alyssa Barry: They interlock, so they're almost like a puzzle piece, because the pieces connect within each other, and then they could connect front to back.

Sayantani Nandy: I thought it was remarkable for their engineering skills.

Allison Lundy: I think one of the challenges children had was figuring out how to put them together.

Child: I have a window.

Alyssa Barry: They kept trying to problem-solve and build on one another's. So I think their brain was just constantly going and just trying to figure out everything that they could make with it, and because it was so open-ended, that the learning really just never stopped.

Child: And then it closes if the monster tries to bite the frog.

Category: Creativity and Imagination

Allison Lundy: For creativity and imagination, we were looking at the different ways children use the toy. So if they were using it for its intended purpose, or if they were using it in a more novel or unique way.

Sayantani Nandy: How a child can transform a toy into a completely different thing.

Allison Lundy: We also looked at if they created a play narrative.

Jeffrey Trawick-Smith: Play narratives are like stories that children create. These are imaginary scenarios that they carry out in a make-believe world.

Child 1: Help me; I'm going in the water!

Child 2: I got you!

Julia DeLapp: We had a tie in this category.

Alyssa Barry: One of the highest-scoring toys in creativity and imagination was the family counters.

Allison Lundy: So the family counters are miniature people. They have adults and babies, and then there are cats, so it resembles a family.

Child: I'm the daddy! With three kitties!

Alyssa Barry: Sometimes they color-coded them; sometimes they grouped them by the type that it was or the size of it. You could almost look at them like math manipulatives.

Child 1: I have two kitties. Two blue kitties.

Child 2: I have six. One, two, three, four, five, six. I have six orange.

Child 1: I've got six yellows.

Allison Lundy: A lot of times children used these to carry out family play narratives. That was what I saw the most with this toy.

Child 1: I go to school, mom.

Child 2: Okay, come on, baby. It's time to go to toddler school.

Sayantani Nandy: That's what they see in their homes, in their families.

Child 2: Okay, have a good day, baby. Be good to your new teacher.

Allison Lundy: They were collaborating; they were working together to put on this more elaborate play narrative.

Alyssa Barry: The other highest-scoring toy was the waffle blocks.

Allison Lundy: I think waffle blocks did well because children did transform it. They used it to create things that didn't necessarily resemble the block itself. They created structures resembling towers or houses. I think that when children transformed the waffle blocks, that was when they were most engaged.

Child 1: What's that?

Child 2: If there's a monster coming, it closes, so the monster will escape.

Child 1: But you could have a pickaxe.

Alyssa Barry: You know, so it was just amazing to see where their mind took them with those. It was so open-ended. And they had that ability to just make anything with it. There really was no expectation.

Category: Social Interaction

Sayantani Nandy: So for social interaction, we were looking for how they interact with their peers when playing with the toy.

Alyssa Barry: Were they parallel to a peer? Was it associative play? Was it cooperative? Were they working together to play the same thing?

Child: Wait, wait. Ok, let's do it!

Allison Lundy: If their interactions with their peers are positive, or if conflicts arise when they're playing with the toy.

Sayantani Nandy: The highest scoring toy in the social interaction is the puppet theater.

Alyssa Barry: So, the puppet theater itself is really unique, because it's not just puppets. The theater is really what stole the show.

Child 1: Amelia, we need it up if we're having a show.

Child 2: Wait, I'll put it up.

Sayantani Nandy: The children, they love to roll up the curtain and roll it down again.

Allison Lundy: And the backdrop you could reverse, so there were different scenes on both sides.

Alyssa Barry: I found often, they were exploring the puppet theater together. "I think it's backwards," or "I think this goes up" and within that, I think we saw the highest levels of just cooperation.

Child 1: You have to go over there to watch.

Child 2: What?

Child 1: You have to go over here to watch.

Allison Lundy: I think puppet theater did so well in social interaction because a lot of time, they were working collaboratively to kind of set up this puppet show and then also perform it.

Child: Guys, the puppet show is starting.

Sayantani Nandy: They would do the puppet show, and a couple of them would pretend to be the audience.

Child (singing): It's such a sunny day!

Category: Verbalization

Allison Lundy: So for verbalization, we were looking at any utterances children make while using the toy, making noise or talking.

Child: C'mon guys, we got three things. So let's fix the car.

Alyssa Barry: It's sound effects, it's making noises and singing. Were they able to have conversations with their peers? Did the conversations last?

Jeffrey Trawick-Smith: One of the highest scoring toys in the area of verbalization was the family counters.

Allison Lundy: There were a lot of play narratives that came along with family counters. So, in order to convey those play narratives, they needed to verbalize.

Child: So now it's time to go, girls. Come on. Baby, come on.

Sayantani Nandy: Children role-played with all those miniature figures. They came up with scenarios they see around them in their homes and environment.

Alyssa Barry: It does replicate something that they've had past experiences with.

Child: We're almost there! It's time to go.

Alyssa Barry: They have that knowledge that they were really able to, like, expand on it and vocalize what they were thinking.

Child 1: Hello, I'm here to get my babies.

Child 2: No, you can't get your babies. They're learning.

Child 1: Learning?

Child 2: Mm-hmm.

Julia DeLapp: The other high-scoring toy was the puppet theatre.

Child: What should we do today?

Sayantani Nandy: When they were putting up the puppet show, there were a lot of verbalization.

Child: If we don't have the background on, then we won't have a show.

Sayantani Nandy: They had a theme for the show. That made provisions for a lot of verbalization.

Child: Pretend you're the mom and I'm the dad. And I'm this baby.

Allison Lundy: So with them putting on the show, they're not only talking to each other about what they need to do, but also talking in order to put on the show and convey their ideas to their audience.

Child (singing): And I bite, and I bite. Chomp.

2019 TIMPANI Toy

Jeffrey Trawick-Smith: The highest scoring toy across all areas were the family counters. They used these toys as replica play toys, that is, tiny, plastic people they could use to carry out all kinds of different scenarios.

Girl: This is my good sister. Blue. Ooh! I'm not your good sister anymore. I'm his good sister.

Sayantani Nandy: You get everyone in there, like as you see in your family. You could have a grandma; you could have a grandpa, and then brothers, sisters, pets.

Child: And here's my new dad. And where's the new mom? Here's the new mom.

Sayantani Nandy: It so much relates to their family surroundings. I believe that's why it was scoring over and over in some of those categories.

Child: I got two babies. One on my arm and one on my hip.

Jeffrey Trawick-Smith: What makes these toys so valuable is they're simple and non-descript. They don't have a lot of detail to them, and that allows children to play with them in almost any way they wish. Children need to discuss with peers who a particular figure represents or what they're doing.

Child 1: Bad guy baby!

Child 2: No, he's a good baby.

Child 1: No, he's a bad guy baby.

Child 2: Okay, fine.

Child 1: The red ones are the bad guys.

Allison Lundy: There's not really one intended purpose. So, in addition to the play narratives, a lot of times children would line them up or they would stack them on top of each other. So it really leads to possibilities for making patterns or for counting.

Child: Now how many kids do I have? One, two, three, four, five. Uh oh, that's going to be a lot.

Julia DeLapp: The family counters was the highest-scoring toy for girls, and the second-highest scoring toy for boys. It also ended up being the most popular toy this year – it was played with more frequently than any other toy.

Implications

Jeffrey Trawick-Smith: I would say that our findings this year are pretty consistent with those of other years. Toys that are simple, non-realistic, that include a variety of different parts have a remarkable impact on children’s play.

Julia DeLapp: In addition, we’ve seen again that some toys do really well in some categories of learning, and others do well in different categories. So it’s important for teachers to be really intentional about the play materials they’re bringing into their classroom and what it is that they’re hoping children are getting out of those materials.

Allison Lundy: You can’t just have one type of toy and expect it to elicit good thinking and learning and also social interaction. You have to put it in your classroom first and kind of observe children’s play, and then take what you observed and kind of think about it, evaluate it, and consider how it could affect their play.

Sayantani Nandy: For me, I would certainly focus on how children verbalize how they are thinking and learning when they play with these toys.

Alyssa Barry Observing is just so powerful and, you know, it's like every day you learn something new. Every student has different experiences, and their excitement might not be what yours is, and I just think that's really important to remember moving forward.

Julia DeLapp: A key lesson from over the years is how important it is to regularly review and reflect on how children are playing with toys, and to ensure that there’s a variety of open-ended materials in the classroom to meet the needs of all learners.

Child: The end.