Executive Function: Skills for Life and Learning Video Transcript

Narrator: Science tells us that brains, minds, are built, not born. And at the center of this dynamic architecture are a set of skills called executive function and self-regulation.

Raver: Children’s self-regulation and executive function are key ingredients in their lifetime performance. It’s not just about learning language or learning numbers or learning colors.

Phillips: We have to be able to work effectively with others, with distractions, with multiple demands. These actually are skills that contribute to the productivity of the American workforce.

Children in background: Don’t do that.

Teacher: Look at your shapes. What should you have done next?

Dr. Zelazo: Educators, I think, are looking for just this sort of thing. And when we describe what we mean by executive function, they say, “yes.” “That’s it. That’s exactly the problem. These kids, they can tell me these rules, but they can’t actually use them.”

Teacher: What’s this?

Narrator: What is executive function?

Dr. Phillips: Probably the best way to think about it is sort of like an air traffic control system in the brain. Just like an air traffic control system has to manage lots of airplanes, going on lots of runways, and really exquisite timing, and so on, a child has to manage a lot of information and avoid distractions. We really think of it as involving working memory, inhibitory control, and mental flexibility. Take a situation where a child is having to take turns. So, first of all, the child has to have inhibitory control. The child has to be able to stop whatever he or she is doing and let the other child take a turn. But when it’s your turn again, you also have to remember what it us you’re supposed to be doing. So that pulls on working memory. If the children who are taking turns after you do something unpredictable you have to be able to adjust what you’re going to do next, and that requires mental flexibility. Children who are struggling with these capacities often look like children just aren’t paying attention or children who are deliberately not controlling themselves.

Dr. Leong: if you don’t have self-regulation, you act out and the teacher puts you in time-out and so then you miss part of the learning that going on, and then you are more upset because you’re behind and so you act out, and so you get this downward spiral.

Narrator: How does executive function develop?

Phillips: In little children, and even in the infant and toddler years, you begin to see the roots of executive functioning skills. What’s going on in our brains is unbelievably intricate and complicated.

Dr. Bunge: The prefrontal cortex, or the front third of the brain, is important for executive function. But it’s more than just prefrontal cortex. This region doesn’t act alone. It’s involved in controlling behavior through its interactions with all other parts of the brain. The brain goes from a situation where you’ve going nearest neurons communicating very strongly with each other and ignoring the rest of the brain to these widespread networks that are connecting these different areas. Executive function changes over the life course. It improves radically over the first few years. It continues to improve throughout adolescence. It’s not until early adulthood that you have the adult-type networks that are very strongly activated that connect different brain regions together. Also, we believe that executive functions can be trained.

Dr. Fisher: It’s just like going to the gym. So, the more you practice in these areas the stronger the capacity is likely to become because you’re hoping to strengthen those neural connections.

Dr. Phillips: Slowly but surely, you’re going to be able to step back and that child is going to go into the world with these skills where they can get along with other people, change rules, and they can be flexible, and they can accomplish new things, and they’re unafraid. If we don’t learn these skills during childhood and adolescent years when they’re coming online we are really ill-equipped as an adult, to hold a job, to maintain a marriage, to raise children, to get along with each other, to basically be part of a civil society.

The Pyramid Model Video Transcript

Tier one is broken down into a couple of pieces. And the first basic-most piece is the building relationship piece. And this is the biggest part of the pyramid in itself. It sets the foundation, being able to understand the things that we do that take away from kids’ emotional readiness for building that relationship. And we call this their emotional bank. And we think of this as a piggy bank account or a bank account. And the things that we do that, take away from their emotional bank, like telling them, no, don’t stop, or using negative language and not stating things in a positive way. We’ve come to understand it’s not a one-to-one correspondence as far as this bank account. We know that it’s a five-to-one ratio – five deposits that needs to go into their emotional bank for every one of those withdrawals. And so, what we need to do as educators, as adults, is to get better at making deposits into their emotional banks. Deposits are simple little things that we can do on a daily basis. One, and the biggest thing that I think we forget to do, just smile and be excited that they’re there in our environment that day. To look at them and I know it’s hard to do this when we have little ones with challenging behaviors or that might push our buttons, that we look at them and say we’re excited that you’re here. Because not only do I get to teach you, but you get to teach me. You get to teach me skills about how to interact with people, how to interact and modify curriculum, and it challenges me to be a better teacher just to have you around in our environment. So deposits – body language, smiling at our students, generally feeling excitement that they’re there, getting down on their level, talking to them in a soft, nice tone of voice, not yelling across the room, those kinds of things. So, that’s a start. Other things that we can do are deposits; commenting on what they’re doing, specific praise. And what we mean by that is not saying just, good job, but we’re saying, good job keeping your hands to yourself. Good job sitting at the table and writing with that marker and things like that - - so being very specific about the praise that we’re giving them. What a withdrawal is, is that language that we use in our environment as well. We start with trying to eliminate “no,” “don’t,” “stop.” Saying those words are words that start making withdrawals within a child’s emotional bank. But there’s also other big withdrawals that we do on a daily basis that we don’t ever think are withdrawals, such as just giving simple directions, directives inside of our classroom. Something like saying, come over here to large group and have a seat, that’s a withdrawal from their emotional bank. And what you have to understand those directives that we give on a daily basis that are part of our routine, part of our classroom structure, things that we have to do, are still withdrawals from their emotional bank and are going to need deposits in order to repair that relationship. If we take too many withdrawals from our students, then what happens is that they’re left with nothing in their bank. And they end up shutting down, and that’s why they don’t want to follow our directions, why they don’t want to follow classroom routines, why they have a difficult time being kind and friendly to their peers. It’s because they have empty in their emotional bank. And the self-worth, the confidence that they have in themselves, the willingness to participate with their peers and interact with their peers is basically gone. Their emotional bank is with them all the time. And so it’s not just within our school environment that they get withdrawals from their emotional bank. They’re leaving to come to school with their mom and their mom’s in a hurry. And she’s saying put on your shoes, eat your breakfast. Put on your seat belt. We’ve got to go. Those are all withdrawals as well from their emotional bank. And a lot of our kids are coming to us already empty. And it’s important for us to understand that. So, when the walk in the door, we’re ready to start repairing or making deposits into that emotional bank.

Teaching Rules in Context Video Transcript

Teacher: Oh they shot the water out of their spouts, excuse me, excuse me. One minute. Commercial break buddy commercial break. I want you to be safe in our classroom, and I want you to be safe in our classroom. So, how are we going to be safe? How are we gonna be safe? Are we gonna move fast We’re gonna walk. Are you gonna walk for me? Thank you. How are you gonna move safely in our classroom? Are we gonna hop like a bunny? You may hop slowly like a bunny to be safe no running that is not safe. Thank you my friend. Thank you sir. Um, excuse me one minute. Despina are you sitting on his lap? Huh? Let’s ask him to scoot back a tiny bit. You have half and she can have half. This one dude’s legs are kinda short aren’t they? There we go, alrighty. He’s telling us a story now okay.

Student: And then a killer whale came.

Individualized Support

Terian. Five minutes, we're going to ring the bell. We're going to line up. Then we get to wash your clothes. Five minutes. Keep going. What? I don't know. Do you want to do that?