ADVANCING RESEARCH ON LEARNING VARIABILITY:

OUR RESEARCH AGENDA

CHILDHOOD IS FULL OF VARIABILITY

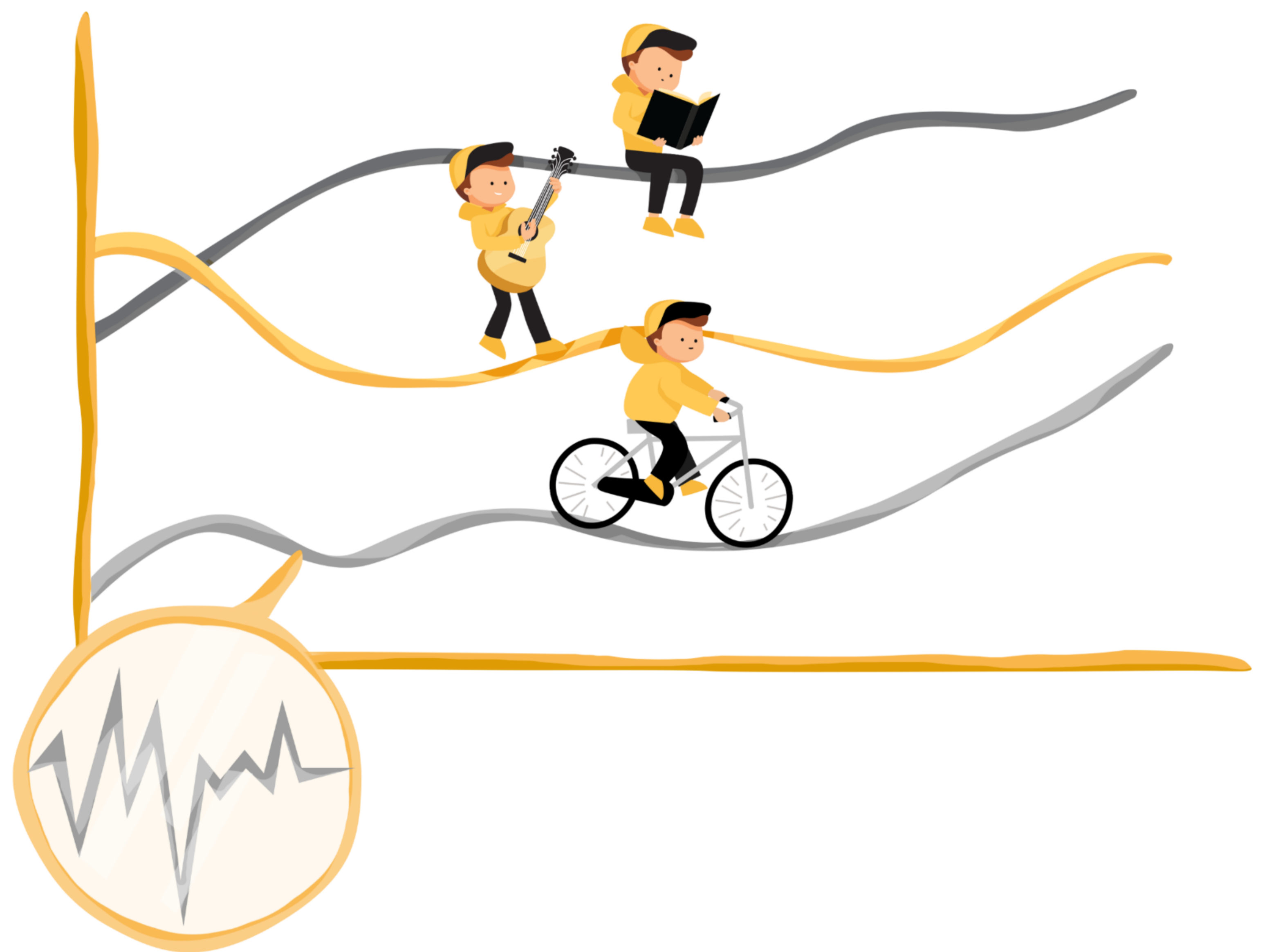Yet education often provides one-size-fits-all instruction aiming at the average student.

We believe that education systems that embrace learning variability help children realize their learning potential. A better understanding of learning variability can enable policy makers and educators make decisions that serve more children, more often.

WITHIN-PERSON VARIABILITY

Understanding variation in and between children's skills over time.

How do children vary in their characteristics over time and what experiences can bring children to the top of their abilities at a given time? Why do children show inconsistent behaviour, skills, and knowledge from one time point to another? What explains such variability and what is its developmental purpose?

WITHIN-GROUP VARIABILITY

Embracing heterogeneity in group learning settings such as classrooms.

How can teaching and learning in a social environment take advantage of variability to improve learning for all children? How can learning experiences adapt to individual children's academic and nonacademic states and foster their development? What classroom practices accelerate learning of lower-performing students while maintaining learning of higher-performing students?

CONTEXTUAL VARIABILITY

Preparing children to learn across contexts and time.

What skills prepare students to learn in future contexts, how do they interact with each other and the context, and how do we teach and measure those skills? The environment shapes how a child interacts and learns within it. How can environments be described such that we may predict a child's success?

DESIGNING FOR SCALE ACROSS CONTEXTS

Making learning solutions effective across multiple contexts.

How do characteristics of environments and children impact a solution's effectiveness and why? In a learning solution, what mental processes or psychological mechanisms are engaged that lead to learning? What program components exemplify these processes and mechanisms?

DATA AND METHODS

Enabling next-generation research, assessment, and design for variability.

How can new types of data provide insights into multidimensional learning, developmental processes, and outcomes? How can assessments enable students and teachers to rapidly act upon within-student and between-student variability across dimensions of learning and development? What in-school research methods and assessments are valuable to practitioners and researchers to meet their goals?

NEW DATA

NEW METHODS

WHAT SUCCESS LOOKS LIKE

This research agenda will be a success if, at the end of 2030, a community of researchers has established fruitful lines of research on learning variability, the education funding community discusses the three types of variability knowledgeably, and innovations are in development to better address variability at scale.

JACOBS FOUNDATION