Abstract: By the time they are three-years-old, children raised in poverty hear 30 million fewer words than their socioeconomically advantaged peers. This word gap predicts later school readiness outcomes and sets the stage for achievement gaps that can follow the child through life. Although parent speech has become a subject of increasing study and intervention, less is known about speech in childcare settings. We conducted a longitudinal study in an early-intervention classroom for 2-3-year-old children from low-income, at-risk backgrounds. We examine the relationship between language input from teachers and peers and children’s language skills over one year. Results show that vocabulary knowledge influences children’s talkativeness in the classroom, and talkativeness and the amount of language they hear positively relates to increases in their language abilities. Our application of automated measurement provides new insight into the dynamics of the classroom language environment and consequences for language development in at-risk children.