



Infoture Research Fact Sheet

<p>What is LENA?</p>	<p>LENA is the only technology that automatically collects and analyzes information about a child's natural language environment and development.</p> <p>The LENA feedback reports help parents improve a child's cumulative language experience and accelerate that child's language and cognitive development, and preparedness for school.</p>
<p>How was this new data collected?</p>	<p>Infoture, using the LENA System, conducted a normative study of audio data by having over 315 families record their child's language environment – adult words and conversational turns – once a month for six months.</p> <p>The children wore LENA for an entire day; parents completed questionnaires at the end of a session, and sent them to Infoture researchers.</p> <p>Families also completed a battery of standard developmental assessments, and met with certified speech language pathologists.</p> <p>The audio data was collected and used for detailed transcriptions that were necessary for software development and study analyses.</p> <p>Through this and ongoing data collection, Infoture has the largest audio recording data in the world with 46,200 hours collected through 3,750 recordings.</p>
<p>What did the research reveal?</p>	<ul style="list-style-type: none"> • Parents who used LENA increased their word count by 33 percent on average. • Of the participants who were below the 50th percentile at baseline, there was a 49 percent increase. • On average, mean conversational turns went from the 41st percentile to the 58th. • LENA measurements correlate with standard assessments. • Most talk occurs in early morning and early evening. • Talkative parents have talkative children and taciturn parents have taciturn children. • Parents of highly advanced children talk more than other parents. • Children in a higher socioeconomic status bracket generally hear more talk than children in a lower socioeconomic bracket. • Young girls hear more talk than young boys. • Moms talk more to their daughters. • First-born sons hear more words and engage in more turns than latter-born sons. • Children with language delay are low on vocalization frequency, vocalization duration and conversational turns. • General patterns of talk are similar for the Spanish-speaking families. • The more the TV is on, the lower the adult word count,

	<p>conversational turns and child vocalizations.</p> <ul style="list-style-type: none"> • There is an inverse correlation between standard assessment scores and the amount of TV time in the home.
Who conducted the research?	<p>A team of world-class scientists, including experts in linguistics, speech recognition technology, computer engineering, speech analysis, statistics, speech language pathology, language research and developmental pediatrics.</p> <p>The Infoture Scientific Advisory Board includes:</p> <ul style="list-style-type: none"> • Charles R. Greenwood, Ph.D. – Director and Senior Scientist, Juniper Gardens Children’s Project, University of Kansas. • John H.L. Hansen, Ph.D. –Department Chair and Professor, Department of Electrical Engineering, Erik Jonsson School of Engineering and Computer Science. • Judith K. Montgomery, Ph.D., CCC-SLP – Professor, Department of Special Education and Literacy, Chapman University. • Partha Niyogi, Ph.D. – Professor of Computer Science, University of Chicago. • D. Kimbrough Oller, Ph.D. – Professor and Plough Chair of Excellence, School of Audiology and Speech Language Pathology, University of Memphis. • Steve F. Warren, Ph.D. – Director of the Schiefelbusch Institute for Life Span Studies, University of Kansas.
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