

NCTM 2017 Annual Meeting and Exposition
April 05, 2017 - April 08, 2017

Language Effects in K-2 ESL Students Receiving Mathematics Intervention Support

Language and Cultural Changes	
BEFORE	AFTER
<ul style="list-style-type: none"> Vocabulary: turn it around, balanced/equal. 	<ul style="list-style-type: none"> Vocabulary: rotate, the same number. Syntax: use of cognates from Spanish (e.g., remove, cancel).
<ul style="list-style-type: none"> Syntax: use of phrasal verbs (e.g., take off, take away) 	<ul style="list-style-type: none"> Linguistically responsive approach to mathematics: use "you language."
<ul style="list-style-type: none"> Cultural reference: rocket ship. 	<ul style="list-style-type: none"> Culturally Responsive: piñata, cupcake trays.

What teachers should do to help ELs	
Linguistically Responsive	Culturally Responsive
<p style="text-align: center;">Language</p> <ul style="list-style-type: none"> Use "you language". Limit the use of phrasal verbs and choose other more descriptive vocabulary (e.g., remove, delete, cancel, add, subtract, rotate). Ask students to explain their thinking with their own words. Limit or explain when words can be used as synonyms (e.g., equal/matched/balanced don't have the same meaning) 	<p style="text-align: center;">Context</p> <ul style="list-style-type: none"> Structure story problems on culturally relevant materials (e.g., piñata). Incorporate students personal experiences (e.g., cupcakes). Support uncommon children experiences with visual aids (e.g. balance scale, rocket ship). Know your students socio-cultural background. Knowledge is not static, and for this reason must be viewed critically.

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