The Impacts of Word Recognition Ability and Semantic Relation on Semantic Processing for Third Graders

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The ability to recognize words increases rapidly for third graders. This age group also starts to distinguish the functionally and categorically semantic relation of words. This study was aimed at determining whether word recognition ability would affect semantic processing and whether a shift of the semantic relation would occur for third graders. We used the child norms of association strength and selected stimuli from the norms to conduct two experiments. Participants were two groups of third graders with different word recognition abilities. In Experiment 1, participants performed semantic judgments on word pairs with either strong or weak association. Children with the better word recognition ability performed more accurately than those with the poorer recognition ability. Moreover, increased accuracy and faster reaction time were found for strong association pairs as compared to weak association pairs. In Experiment 2, participants performed semantic judgments on word pairs with either the functional or categorical relation. Children with the better word recognition ability performed more accurately and faster than those with the poorer recognition ability. Moreover, increased accuracy was found for word pairs with the functional relation as compared to those with the categorical relation. The findings suggest that word recognition abilities and semantic relation affect semantic processing for third graders. First, with more elaborate semantic representations, third graders with the better word recognition ability performed better semantic judgments than those with the poorer word recognition ability. Second, strong association pairs may correspond to closer conceptual links within semantic representations, resulting in increased accuracy as compared to weak association pairs. Third, the organization of semantic representation may be predominantly based on the functional rather than the categorical relation for third graders.

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