

## 7 - Discourse and Argumentation in Science Education | Empirical

### SP - (15756) - THE IMPORTANCE OF SPEECH GENRE APPROPRIATION TO 'TRIPLET' REASONING FOR UPPER SECONDARY SCHOOL CHEMISTRY STUDENTS

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#### **Short Abstract**

*This study underlines the importance of social language development in school chemistry to promote conceptual understanding. In the study, a qualitative approach was taken to studying the relationship between speech genre, represented by language specificity in chemistry, and 'triplet' reasoning, represented by students (N=78) meaningfully sorting and connecting macroscopic, submicroscopic, and symbolic concepts in a concept mapping exercise. The results show that language specificity was highly correlated with previous grade in chemistry ( $r_s=0.82$ ,  $s.d=0.13$ ) and that students with higher map scores had a higher tendency to interact with the 'triplet' concept scaffold in their concept maps. Only 11 students sorted their concepts fully according to 'triplet' conceptual meanings.*