Contribution ID: **558** Type: **Oral Presentation**

School Learners‘ alternative conceptions regarding the Chemical Reaction Rate in certain Schools in the Lepelle Circuit, South Africa

Tuesday 8 July 2025 12:10 (20 minutes)

Reaction rate is a fundamental part of chemistry which forms a basis for the comprehension of subsequent chemistry areas. A Reaction Rate Concept Test (RRCT) was developed in the form of a questionnaire and administered to a group of physical sciences learners in South Africa to collect data, and was statistically analyzed. This study was based on the conceptual change approach as the strategy which will be used in the teaching and learning contexts to minimize or eliminate misconceptions (alternative conceptions) held by most learners at the high school level. The results showed that only a few (about 34%) of the learners mastered certain concepts, while the majority (about 66%) of the learners struggled to deal with the same concepts. This means that most learners do not understand the effect of factors affecting the reaction rate. There were serious misconceptions among the learners that had a significant impact on their academic performance. These misconceptions are shown to have a high resistance to change, and the teachers should always guard against and be vigilant enough to deal with them as soon as they emerge.

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Session Classification: Physics for Development, Education and Outreach