ENHANCING TEACHER TRAINEES' UNDERSTANDING ABOUT CHEMICAL REACTIONS AND EQUATIONS

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ABSTRACT

Teacher trainees with misconceptions about chemical phenomena tend to pass this on to their students, thereby creating a vicious cycle of misconceptions which are often difficult to break among learners. This article presents the use of micro chemistry activities and worksheet activities in remediating identified alternative conceptions about types of chemical reactions and their diverse representations among 74 chemistry teacher trainees. The design adopted for the study was a case study which followed the pre- test, post-test, delayed test approach in order to assess trainees' retention of desired basic concepts about types of chemical reactions. The study which lasted for four weeks exposed the trainees' weaknesses about the nature of matter, types of chemical reactions and their representations. Remediation was offered to enable the trainees to distinguish between types of chemical reactions, with a success rate of 85%. The tools used in this study were found to have great potential in uncovering, deconstructing, and remediating trainees' misconceptions as well as equipping them with skills, such that authentic conceptions were built at the end of the study period.

Keywords: chemical equation, chemical reaction, conceptions, representational levels.