

An Exploration of Students' Conversions from a Symbolic to a Verbal Representation

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ABSTRACT This study was carried out with 48 pre-service mathematics teachers on a Real Analysis for Teachers course. The study was exploratory in nature with the purpose of understanding the challenges involved in changing a symbolic statement into a verbal written statement. The analysis of data generated from the students' written responses revealed that most students recognised and decoded the different parts of the symbolic statement correctly. However problems emerged at the syntax level, where many failed to arrange the words and phrases to create well-formed sentences. Although some students had developed familiarity with certain linguistic and symbolic resources, there were many students who could not distinguish between the universal and existential quantifiers. Instructors are advised to provide opportunities for students to interrogate the meaning and implications of statements provided in symbolic form before progressing to more complex proofs which utilise complex symbolisation