

SECOND LANGUAGE COMMUNICATION STRATEGIES IN LOUD READING OF MATHEMATICAL EXPRESSIONS

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Language-rich classroom activities are central for mathematics learning. When students daily discuss, explain, or argue about mathematics, at some point, transformation of written mathematical expressions into speech will occur. If a student is not familiar with the pronunciation of a symbolic expression, this might involve some problems. The situation is similar to a situation of second language (L2) communication; lack of vocabulary threatens to impair communication. For L2 users, a plethora of second language communication (SLC) strategies have been identified.

The purpose of the present study is to gain more knowledge about the situation when students struggle to transform symbols into speech, focusing on their strategy use. To explore whether oral SLC strategies are used in this type of situation, recordings of loud reading of short mathematical texts (3-8 lines) were analysed. Readers were 18 university students taking a preparatory course in mathematics. The texts included, e.g., integral expressions, differential equations, and double angle identities. The analysis was based on Dörnyei and Scott's taxonomy (1997), adjusted for analysis of sound recordings from a situation not including an active communication partner and normal L2-pronunciation problems.

The results showed that students do use SLC strategies when reading out mathematical symbols. Of 18 potential strategies, 15 were found at least once in the data. Strategies included different ways to *change the message of the text*, specific strategies for *change of vocabulary*, *vocabulary search*, and different types of *self-correction*. Strategies used to keep the communication channel open while struggling to read, were often combined with other types of strategies. The use of SLC strategies could indicate similarities in the obstacles encountered when transforming symbols into speech to obstacles in oral L2-communication. Whether this supports the idea of basing mathematics teaching on L2-learning methods, which has sometimes been suggested (Wakefield, 2000), is yet to be investigated.

References

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