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LINGUISTIC BACKGROUND OF MISCONCEPTIONS ON MASS AND WEIGHT**Abstract:**

Misconception about mass and weight is a well-known concern in science education. Recently carried out researches point out that pupils use mass instead of weight or vice versa. The real reason of such use is based on various roots. Both related concepts are needed to be constructed without misuse or misunderstanding in memory. Mass and weight concepts have a large use among the public. Therefore teachers and students can make relations between concepts and real life.

Linguistic approach has some difficulties since different culture and society. Since it is a widely well-known misconception among different societies, such use is a critical misunderstanding in Turkish and English as well. Therefore this study mainly based on the linguistic background of misconceptions on mass and weight. Semi-structured items were used to collect the data to understand the linguistic misuse in this topic. Written data was collected from the primary school teacher education students (PSTES) and subjected to content analysis to point out the linguistic roots of such misconception use. Additionally, Turkish and English dictionaries were subjected to document analysis to carry out the meaning of mass and weight and their adjectives and adverbial use.

It is understood from this study that Turkish language does not have enough adjectives or adverbs to identify the objects at part of mass and weight. It has not got opposite word of massy in Turkish. In English, light or weightless is used as an opposite meaning of massy. In Turkish, both massy and heavy have a similar meaning to define the objects. This misuse is located in Turkish language dictionaries as well. Similarly in English dictionaries, the synonymous word of massy is written which is known as heavy.

This complexity of misconception on mass and weight is based on language learning at childhood years. The habits of using both words in the same meaning is an important problem in learning process in science courses. Eventhough researches focused on instructional design to correct the misconceptions on mass and weight, the documentary findings and content analysis of PSTES' viewpoint on the real reason of such misconception in this study point out that it is not only a pedagogical situation but also a linguistic problem as well.

Keywords:

Misconception on Mass and Weight, Linguistic Background of Misconception

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