

## Prospective Science Teachers' Metaphorical Images about 'Light'

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**Abstract.** The metaphors are powerful mental materials to employ when one wants to explore and understand something esoteric, abstract or highly speculative. And, metaphors build a non-literal relationship between abstract concepts and something that is more familiar, concrete and visible according to individual metaphorical images. Besides, it helps one make sense of the world and reality and of the circumstances he or she is currently involved in. Owing to metaphors, the unknown things are described with the concepts that we know and understand, and that is an unusual juxtaposition of the familiar with the unfamiliar. In this context, the metaphors could be useful to facilitate the teaching process and also, to determine learners' lack of knowledge and misconceptions. The aim of this study is to reveal the metaphorical images by using metaphors to identify the lack of knowledge and misconceptions of prospective science teachers. The study was conducted with 228 volunteer prospective science teachers. After eliminating the invalid metaphors, 201 of prospective science teachers were participated to the study. The data was collected by a form including a question which is asking to complete the phrases of 'Light is like ..., because... /Light is similar to ..., because...' in Turkish. The content analysis was used to interpret the data. According to the findings, 95 valid metaphors about 'light' concept were determined. These metaphorical images were categorized with respect to statements of the study group. The diagram of prospective science teachers' metaphorical images was drawn. It is identified that prospective science teachers have various misconceptions about 'light'. Implications of metaphor and metaphorical images for science teacher education are discussed.