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## The use of data triangulation as a resource to find a better strategy to teach concepts of physics applied to medicine

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Potentially meaningful materials were developed to promote meaningful learning of concepts of physics applied to medicine. They were used in implementations with four different groups of students, and the implementations were modified according to the needs and wants of each situation. The didactic proposal involved experimental activities, simulation and computational modeling, recreational/playful activities, concept mapping, and V diagramming. This paper focuses on data triangulation as a resource to find strategies that are more adequate for teaching concepts of physics applied to medicine and, at the same time, to help finding evidences of the occurrence of meaningful learning of physics concepts, which might stem from the implementations themselves. It is not the aim of this paper to investigate the proposal per se. Hence, reliable and validated pre-test and post-test has been used in these implementations and is presented in this paper. Data gathered by these tests underwent non-parametric statistical analyses. It can be observed that the last two groups presented relevant improvements in the results of the post-test whereas the very last one showed even more relevant results in comparison to the other groups. This finding might be due to the use of recursiveness, which did not occur in the three previous implementations.

**Apply to be considered for a student award (Yes / No)?**

No

**Level for award (Hons, MSc, PhD, N/A)?**

PhD

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