

**PROSPECTIVE SCIENCE TEACHERS' MOTIVATION ON AND OPINIONS
ABOUT THE USE OF MULTIPLE REPRESENTATIONS IN PHYSICS**

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Abstract: The use of representations has been among the important issues in physics teaching as it helps students develop problem solving skills and improves their academic performance in physics. Literature suggests that some of the representational formats might be more challenging for students than others when they have not enough opportunity to use different formats. Thus, it might be suggested that creating environments for students where they have a chance to use multiple representational formats while solving physics problems is necessary for their academic development. At this point, it seems vital to investigate prospective teachers' motivation on and opinions about the use of multiple representations as they are the future teachers. In the present study, the aim was to investigate prospective science teachers' motivation on and opinions about the use of multiple representations in physics. The study was conducted with 183 prospective science teachers in a western university in Turkey. To collect data, the translated version of the Multiple Representations Usage Survey was employed. To analyze data, the total frequencies and percentages with respect to participants' answers to the survey were calculated. The findings revealed that the majority of the participants do not find themselves capable of learning physics or solving physics problems without help, they are more confident in identifying and eliminating their misconceptions, they are half-motivated in learning physics, their use of multiple representations is on average, the majority of them think that the use of multiple representations eases their understanding of problems, they mostly think that through the use of multiple representations it is easier to find the correct answers, and most of them do not think that they are capable of understanding the close relation among multiple representations. The implications of the findings will be discussed in light of the literature.

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