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This article examines high school students’ performance on an interactive multimedia tutorial for learning physics concepts in conjunction with their individual differences. Students’ performances were compared between two sections of the tutorial, the initial portion where the students learned concepts and the final portion that required the students to apply the concepts. Results showed that students in general performed better on the knowledge acquisition than knowledge application phases of the tutorial and differences emerge between students with left and right hemispheric preferences on performance at different stages of knowledge acquisition. The results indicated that students with right hemispheric preferences might benefit more from instructional strategies typically employed in tutorials for learning science, such as the inclusion of illustrations, analogies, and animation. The authors asserted that varying preferences or aptitudes play different roles at different stages of model development in learning from a tutorial about physics concepts.

Keywords: Interactive multimedia tutorial; Physics; Hemisphere preferences; Knowledge acquisition; Hawaii.