TEST FOR KNOWLEDGE, PLAY FOR UNDERSTANDING: USING SERIOUS GAMES TO ADVANCE BEYOND RECOGNITION AND DISCRIMINATION TO DEEPER BEHAVIORAL AWARENESS OF DIFFICULT TO LEARN SUBJECTS.

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Abstract: In this presentation we will discuss the findings of a three-year research project conducted on the use of serious games for teaching students’ to recognize, discriminate, and mitigate common cognitive biases in decision-making. Furthermore, we will discuss how game features were conceptualized and designed to encourage higher order thinking processes that encouraged students to consider how decision-making heuristics (cognitive biases) inherently move them toward certain thoughts and subsequent poor decisions.

Our research addressed the following questions. Does the video game outperform a control group that does not play a game (training video condition)? Does the game help individuals recognize and discriminate between cognitive biases? Does the game help individuals mitigate cognitive biases?

Overall, findings showed that our serious game outperformed the video condition in training gains and practical effectiveness. In addition, the benefits of the game persisted for several months after training and were evident on a measures of transfer created independently of the game.

We suggest that serious games can play an important role in classroom instruction particularly in cases where students are required to use higher- order thinking or metacognitive skills. These findings have applications for future research on serious games for education and for the practical application of games within learning contexts.

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