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Leaderboards in a virtual classroom: a test of stereotype threat and social comparison explanations for women's math performance.

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Summary: Gamification includes the use of gaming features, such as points or leaderboards, in non-gaming contexts, and is a frequently-discussed trend in education. One way of gamifying the classroom is to introduce leaderboards. Leaderboards allow students to see how they are performing relative to others in the same class. Little empirical research has investigated the impact of leaderboards on academic performance. In this study, 80 female undergraduates took a math test in a virtual representation of a classroom after being exposed to one of three leaderboard conditions: a leaderboard where men held the majority of the top positions, a leaderboard where women held the majority of top positions, and a no leaderboard condition. Participants in the female majority leaderboard condition performed more poorly on the math test than those in the male leaderboard condition, yet demonstrated a higher level of academic identification than those in the male and control conditions. The authors conclude with a discussion of the implications that this study's findings may have for the use of leaderboards within educational environments.

Classification: U55 D45 C65 C75

Keywords: distance education; telelearning; gender studies; human-computer interface; interactive learning environments; teaching/learning strategies

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