Learning Choices Predict High-School Students' Memory for Critical Feedback

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Abstract

Students' learning choices, such as seeking critical feedback or revising their work, provide insights into the learning processes that unfold when students learn on their own. This research aims to characterize high-school students who choose to seek critical feedback and to revise posters in a digital choice-based assessment game. Ninety-two students from a Western US high school were sampled. A two-step clustering method was employed to automatically identify student groups based on students' choices in the game. Results showed that two good-quality clusters were identified: students with a low frequency of choosing to seek critical feedback and to revise (50% of students) and students with a high frequency of choosing to seek critical feedback and to revise (50% of students). A one-way ANOVA analysis was conducted to compare students' memory for critical feedback between the two clusters. Results showed that students in the high frequency cluster of choosing critical feedback and revising remembered significantly more critical feedback than students in the low frequency cluster of choosing critical feedback and revising. Moreover, this model constitutes a better fit for the data [$F(2, 89) = 4.11$, $p < .05$] than the previous model obtained via a standard linear regression analysis employed to predict students' memory for critical feedback using students' choices [$F(2, 89) = 20.99$, $p < .001$]. This result suggests that choosing to seek critical feedback and to revise are good choices for improving students' memory for critical feedback.