

Continuous Evaluation of Instruction

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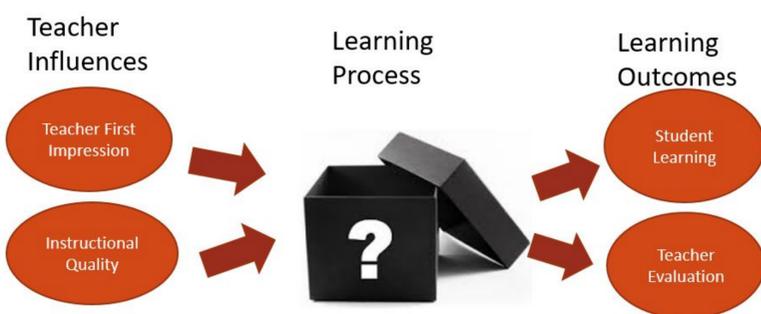
ABSTRACT

Prior research has found that judgments of very brief snippets of classroom video predict student evaluations of instruction, but the meaning of this correlation is ambiguous. A previous study used videos that varied first impression and quality of instruction and found that quality of instruction is the strongest determinant of student factual and conceptual learning as well as student evaluations. This study uses joysticks to collect continuous evaluation from students, which will allow us to begin to understand the instructional features that lead to changes in student evaluation, with the goal of using this information to improve student engagement and learning.



OBJECTIVES

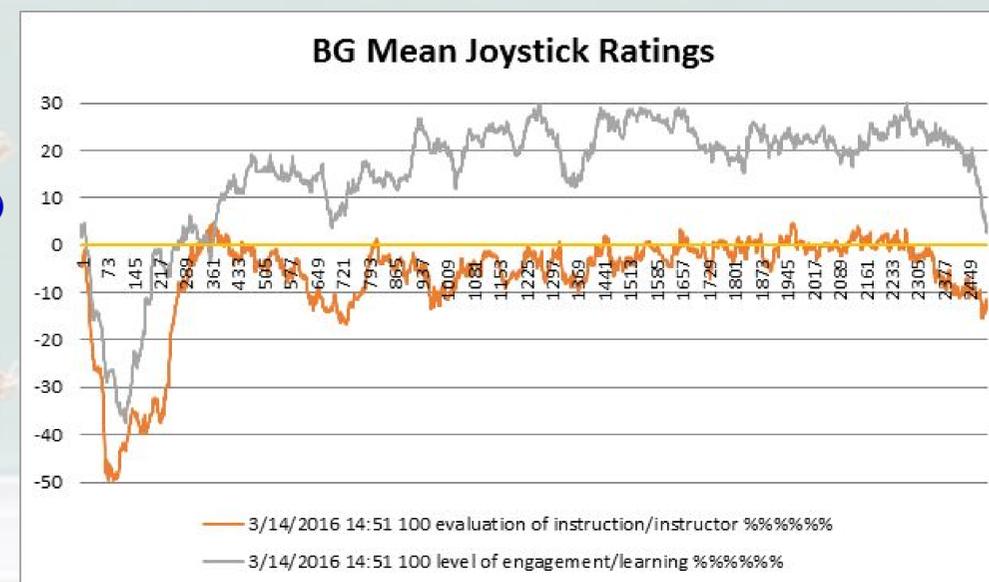
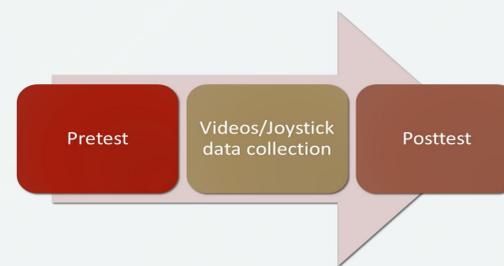
- To make the “black box” more transparent
- To evaluate how the quality of the first impression and the quality of actual teaching influence learning and teacher evaluations
- To measure the accuracy and reliability of teach evaluations
- To observe how mindset (beliefs about intelligence) and motivational beliefs/self-regulated learning interact with instructional quality and first impression



METHODS

Data Collection

- Demographic Variables
 - Age, gender, race/ethnicity, year in school
- Pretest
 - 5 multiple-choice question quiz and 1 open-ended question
 - Mindset questionnaire
 - Motivated Strategies for Learning Questionnaire (MSLQ)
- Student Learning
 - 18 multiple-choice questions
 - 1 open-ended question
- Teacher Evaluation
 - 14 specific traits and 4 overall instructor rating items



	Good First Impression	Bad First Impression
Good Instruction	GG	BG
Bad Instruction	GB	BB

RESULTS

- Students who experienced higher instructional quality achieved higher quiz scores and rated their teacher higher.
- For learning, the BB score is lower than GG score.
- Higher joystick ratings during the lesson predicted higher post-test ratings after the lesson.

The chart below shows the two-way ANOVA results for U.S. students.

Dependent Variable		Independent Variables							
		First Impression				Instructional Quality			
		F	df	Partial	Sig.	F	df	Partial	Sig.
Student Learning	Total Quiz score	9.432	1	.217	.004	6.993	1	.171	.012
	Accepting	.611	1	.018	.440	48.151	1	.586	.000
	Active	.010	1	.000	.920	10.346	1	.233	.003
	Anxious	2.450	1	.067	.127	1.011	1	.029	.322
	Attentive	3.809	1	.101	.059	37.603	1	.525	.000
Perceived Teacher Personality Traits	Competent	.642	1	.019	.429	14.901	1	.305	.000
	Confident	1.105	1	.031	.301	15.940	1	.319	.000
	Dominant	4.232	1	.111	.047	4.615	1	.120	.039
	Empathetic	.816	1	.023	.373	9.070	1	.211	.005
	Honest	.078	1	.002	.781	13.098	1	.278	.001
	Likeable	.631	1	.018	.432	13.148	1	.279	.001
	Optimistic	.045	1	.001	.834	11.836	1	.258	.002
	Professional	.116	1	.003	.735	13.973	1	.291	.001
	Supportive	1.243	1	.035	.273	28.777	1	.458	.000
	Warm	.302	1	.009	.586	17.961	1	.346	.000
	Excellent Teacher	.058	1	.002	.812	19.865	1	.369	.000
Overall Teacher Ratings	Clear & Understandable	.059	1	.002	.809	39.695	1	.539	.000
	Well-Prepared	.071	1	.002	.791	50.484	1	.598	.000
	Interesting	.277	1	.008	.602	12.462	1	.268	.001

DISCUSSION

These results support previous research in this project that show that first impressions are less important than the overall quality of a lesson in determining both learning and students' evaluation of instruction. They also suggest that the joystick method may provide a method of capturing student experience of lectures, and help identify instructional moves that can promote engagement and learning as well as those that do the reverse. This method provides more fine-grained information than standard course evaluations provide, and may also provide feedback that instructors can use to improve teaching.

