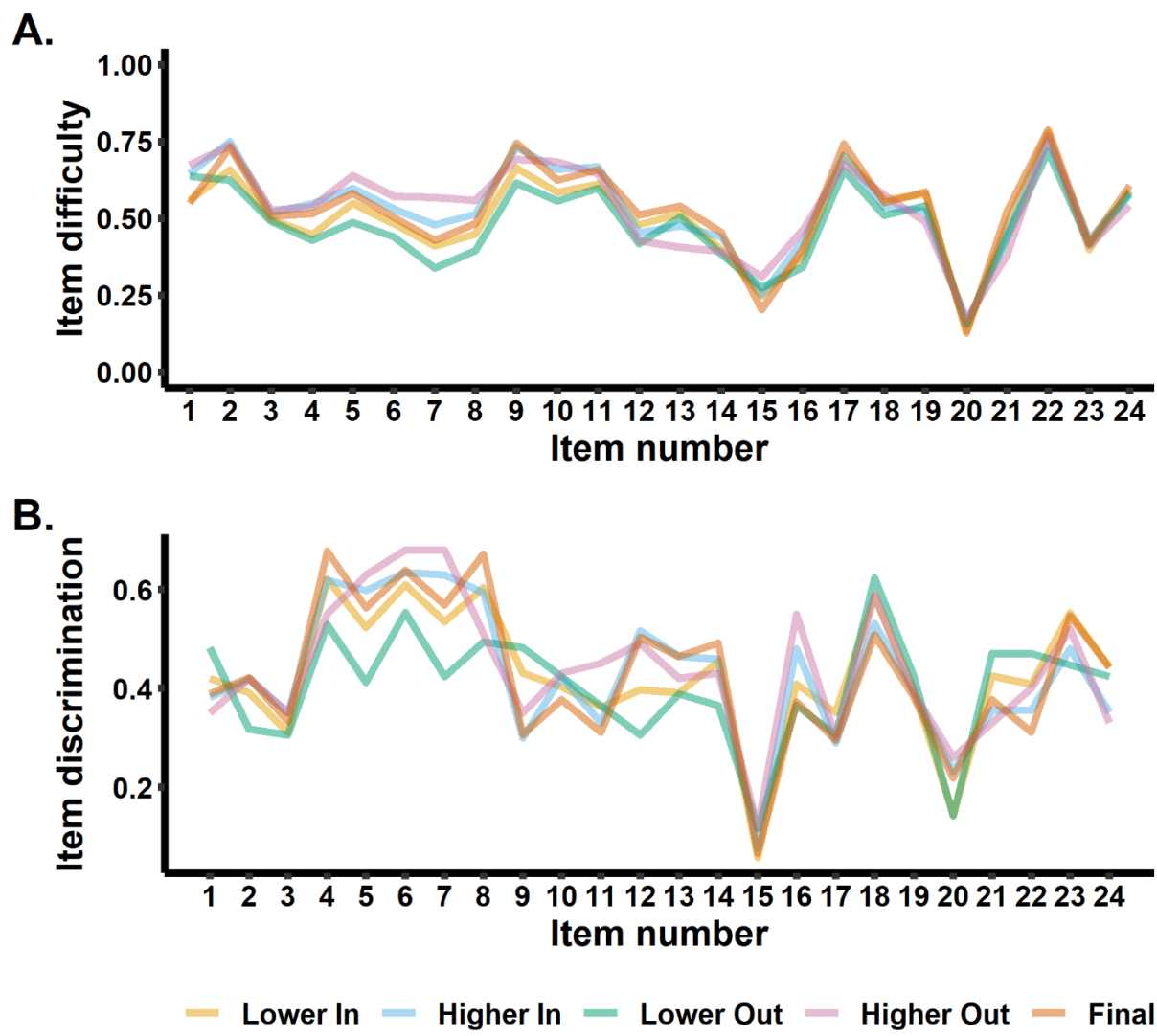**How administration stakes and settings affect student behavior and performance
on a biology concept assessment**

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Supplementary Materials – Table of contents

Supplemental Figure 1. Item difficulty and discrimination values for each question on the IMCA in the different administration conditions. The item number corresponds to the numbering scheme used in Shi et al., (2010). (A) Items with higher difficulty values indicate a higher proportion of students responded to the item correctly. (B) Items with a high discrimination value indicate that the item differentiated well between high- and low-performing students.

Supplemental Table 1. Item difficulty and discrimination for the full-length IMCA instrument administered in 2014		
Item	**Difficulty**	**Discrimination**
1	0.85	0.28
2	0.86	0.24
3	0.62	0.45
4	0.6	0.81
5	0.66	0.74
6	0.69	0.74
7	0.62	0.80
8	0.69	0.62
9	0.89	0.28
10	0.86	0.27
11	0.81	0.41
12	0.62	0.50
13	0.58	0.36
14	0.52	0.54
15	0.34	0.33
16	0.45	0.46
17	0.82	0.30
18	0.72	0.45
19	0.55	0.54
20	0.24	0.31
21	0.52	0.59
22	0.86	0.30
23	0.56	0.60
24	0.69	0.50

Supplemental Table 2. Linear mixed effects model[a] on the effects of administration stakes and setting on concept assessment completion time					
Parameter	**Sum Sq**	**Mean Sq**	*df*	**F**	*p*
Administration condition	14807266	4935755	3	76.768	<.001
Post-hoc comparisons					
Contrast	**Estimate**	**SE**	*df*	*t*	*p*
Higher In: Higher Out	-218.4	16.9	1097	-12.88	<.001
Higher In: Lower In	39.1	15.4	1888	2.55	.053
Higher In: Lower Out	-19.6	19.0	1899	-1.03	.730
Higher Out: Lower In	257.5	18.1	1900	14.24	<.001
Higher Out: Lower Out	198.8	21.2	1895	9.36	<.001
Lower In: Lower Out	-58.7	18.6	1101	-3.15	.009
Model R^2 = 0.22					
[a] Completion time ~ administration condition + (1 | ID)					

Supplemental Table 3. Computations of Fisher's z-tests concerning differences between correlations of concept assessment score and average unit exam score					
	Lower In	**Higher In**	**Lower Out**	**Higher Out**	**Final**
Lower In	-	0.405	0.190	0.017	0.007
Higher In	0.405	-	0.013	0.009	0.010
Lower Out	0.190	0.013	-	0.160	0.000
Higher Out	0.017	0.009	0.160	-	0.000
Final	0.007	0.010	0.000	0.000	-
Red text indicates significant differences in correlation values.					