

Learning Catalytics

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Abstract.

Learning Catalytics is an interactive student response tool that encourages team-based learning by using students' smartphones, tablets, or laptops to engage them in interactive tasks and thinking. As an instructor, you can pose a variety of open-ended questions that help your students develop critical thinking skills, while monitoring responses with real-time analytics to find out where they're struggling. With this information, you can adjust your instructional strategy in real time and try additional ways of engaging your students during class.

1 Introduction

Learning Catalytics features open-ended, multiple-choice, and image upload questions that encourage collaboration among students for team-based and group learning. It also enables instructors to monitor student responses and keep tabs on how well students understand what is being taught and discussed.

We can submit questions that require numerical, algebraic, textual, graphical, or multiple-choice responses. Open-ended questions require students to provide their own answer before the correct response is shared by the instructor, encouraging higher-level thinking and giving you a clearer view into what students are really thinking. Also, we can automatically group students for discussion of a question based on their responses and location, regardless of class size.

Learning Catalytics provide students with the structure for team-based and collaborative learning by engaging in discussion, articulating arguments, and resolving differences to reach a team consensus answer. This permit us augment a traditional lecture, drive active learning in a flipped classroom, or bring the benefits of in-person interactions to completely asynchronous online courses.

Through this tool, we can identify misconceptions and monitor responses to find out where students are struggling. We can use any device to keep track of how students are progressing in real time without being tethered to the podium.

The following figures show screenshots of the application Learning Catalytics.

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Courses Questions Classrooms Training and Support Help Feedback Student view

My Courses

[We made exciting enhancements to Learning Catalytics for the fall semester! See our \[What's New\]\(#\) page for details.](#)

[Create course](#) [Copy a course](#)

Course	Modules	
Armada	22	<input type="checkbox"/>
Curso de muestra	1	<input type="checkbox"/>
Física	1	<input type="checkbox"/>
Física C versión 1	17	<input type="checkbox"/>
Física C versión 2	15	<input type="checkbox"/>
Física D	10	<input type="checkbox"/>
Física II P-2-1T2017	11	<input type="checkbox"/>
Física II P1 - 1T2017	11	<input type="checkbox"/>
Física II P1 2T2017	12	<input type="checkbox"/>
LASERA 2017	2	<input type="checkbox"/>
lasera2	2	<input type="checkbox"/>

ALWAYS LEARNING PEARSON

Fig. 1 Homepage

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Courses Questions Classrooms Training and Support Help Feedback Student view

[My Courses](#) > **Armada**

[Settings](#) [Students](#) [Teams](#) [Gradebook](#) [Share course](#) [Send course](#) [Delete course](#)

[Create module](#) [Copy module from...](#)

Module	Type	Date	Results	
Ondas Mecánicas	Team-Based Assessment	2017-09-20		<input type="checkbox"/>
Ondas Sonoras	Team-Based Assessment	2017-09-25		<input type="checkbox"/>
Temperatura y calor	Team-Based Assessment	2017-09-29		<input type="checkbox"/>
Propiedades térmicas de la materia	Team-Based Assessment	2017-10-04		<input type="checkbox"/>
1era Ley de la Termodinámica	Team-Based Assessment	2017-10-11		<input type="checkbox"/>
2da Ley de la Termodinámica	Team-Based Assessment	2017-10-16		<input type="checkbox"/>
Carga eléctrica y campo eléctrico	Team-Based Assessment	2017-11-08		<input type="checkbox"/>
Ley de Gauss	Team-Based Assessment	2017-11-15		<input type="checkbox"/>
Potencial Eléctrico	Team-Based Assessment	2017-11-20		<input type="checkbox"/>

Fig. 2 Modules

5. multiple choice

¿Cuál es la dirección del campo eléctrico de la distribución de carga mostrada en la figura en los puntos 1, 2 y 3? (Nota: los puntos 1 y 2 están en la línea bisectriz que divide el segmento que conecta las cargas).

Round 1 109 responses, 25% correct

Round 2 119 responses, 53% correct

A. 6%	A. 6%
B. 10%	B. 5%
C. 25%	C. 53%
D. 25%	D. 12%
E. 34%	E. 24%

A. 1: → 2: 0 3: →
 B. 1: ↑ 2: → 3: 0
 C. 1: → 2: → 3: →
 D. 1: 0 2: 0 3: ←
 E. 1: → 2: 0 3: →

Fig. 3 Results checking