RESEARCH INSIGHTS

Drivers of Success in Coursera Labs

BY
Teaching & Learning
Data Science

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The Why
Behind This
Research

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I want to make a Coursera Lab…
but *HOW* do I make a **great one**?

This research aims to answer that question.

Methodology

- Aligned on pedagogy criteria

- Tagged each lab, combined with existing data

- Cleaned, controlled, analyzed

- Modeled to determine impact

- Assessed findings by subgroups

- Prepared share outs

362,000+ lab interactions

seen across

237,000+ unique learners

within

32 graded labs

in our sample

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Which Labs were tagged?

- The 1st Graded Lab in each course, after filtering for high enrollment

- No more than 5 labs per any partner

Where were learners joining from?

- USA and India together made up ~ ½ of total enrollments

- Paying and auditing Consumer learners each comprised more than 30% of enrollments, followed by Enterprise learners

Main outcome measures

Course Completion

As our indicator of persistence and retention in their learning

Likelihood of Five Star Rating

As our indicator of satisfaction and enjoyment in the lab

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Data analysis technique

- Double machine learning, in particular, partially linear regression model (PLR)

What was controlled for?

- Course Level: subject area domain, difficulty, order in specialization, total number of graded items, etc.

- Lab Level: first attempt pass rate, module number in course, other tagged features

- Learner Level: enrollment type, country, education, employment status, number of active days on Coursera before the lab

Results

What you've been waiting for!

Strong alignment between drivers of course completion and satisfaction from labs

Same factors showing significant positive effects on both completion and rating

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Largest positive factors

Practice

Is there an Ungraded Lab before this Graded Lab?

+12% completion

+13% five-star rating

Industry Connection

Is there a clear reference to an industry situation or job scenario in this Graded Lab?

+5% completion

+11% five-star rating

Staff Support

Is there a course staff member answering students' questions in the forum?

+39% completion

+25% five-star rating

Solution Guide

Is there a solution guide or walkthrough after the Graded Lab?

+45% completion

+34% five-star rating

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Factors only boosting satisfaction

Hints

Are any hints provided?

+5% five-star rating

External Support

Are external resources provided by instructors to help with troubleshooting?

+1% five-star rating

Helping learners feel better if stuck but not exactly helping them get unstuck!

![Coursera logo top right. A woman with glasses and long curly hair wearing a red and white striped sweater sits on an orange leather couch using a laptop.]

Nuances by Subgroup

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Impact by subgroup

Does **industry relevance** have a stronger effect for *job seekers*?

+9% course completion for job seekers

+4% for full-time workers
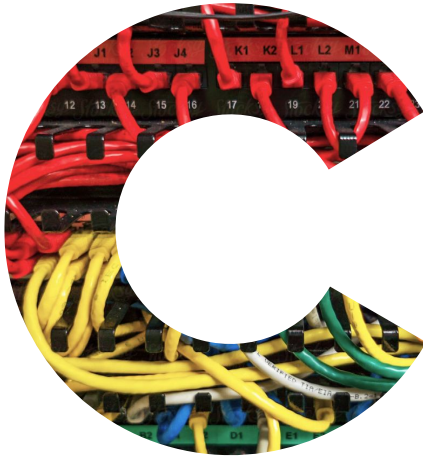
0% for those not seeking employment

Does **practice** have a larger impact in more *difficult content*?

+30% course completion in intermediate courses

+5% for beginner courses

Design Takeaways

1. Aligning with industry scenarios and using real-world datasets is what learners want in Graded Labs, just as we see in Professional Certificates and capstone projects.

2. Learners require personalized support with technical assessments, from staff or potentially Generative AI, with one-size-fits-all hints and resources not boosting completion.

3. Learners want hands-on practice opportunities, and Ungraded Labs fit this need, increasing satisfaction and persistence.

4. Reinforcing key skills after a Graded Lab helps learners to continue successfully with greater understanding.

What's Next?

1. Apply these design recommendations to your own Coursera Labs in development.

2. Tell us what's working best for your students and in your content.

3. Monitor these criteria over time.

Primary Investigators & Authors

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