Entrepreneur & Innovation Exchange
Published online at EIX.org on October 03 2016
DOI: 10.17919/X9S59R

What 26,000 Students Reveal About Teams and Mentors in Online Courses

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KEYWORDS: Teaching Methods, Entrepreneurship.

Analysis of more than 26,000 students suggests that team participation and mentorship can substantially improve engagement and completion in online learning.

This resource is meant to help educators interested in adding mentorship or team-based exercises to their courses, especially when teaching online. The context here is my entrepreneurship MOOC on NovoEd.com (https://eiexchange.com/NovoEd.com) (https://eiexchange.com/NovoEd.com)

Background

These best practices are based on data from an eight-week course on Technology Entrepreneurship, which ran from September through December of 2013. I have taught this class eight times now on NovoEd.com (https://eiexchange.com/NovoEd.com) (https://eiexchange.com/NovoEd.com) and it has been taught for the past 10 years at Stanford. The class emphasizes team-based, experiential education. A series of short video lectures along with links to readings are included, but these are secondary. I consider the eight assignments, which are a team-based project to find and evaluate a startup idea, to be the core of the class.

More information on the methodology that generated the data is at the end of this article.

Questions to consider first

Is teamwork right for my course?

The short answer is most likely, yes. Many courses can benefit from teamwork and not just those that you would traditionally think of as team-project based courses. Business and engineering classes are often a natural fit for team-based projects as there is often a clear real-world application to the principles. However, other types of classes can also take advantage of teams. Studies show that students learn and retain material better when they engage with it in an active, hands-on way. In addition, today's employers are looking for students who are not only individual contributors but also who are good teammates and who know how to collaborate well and how to lead a team.

Is mentorship right for my course?

Our research suggests that many types of courses can benefit from a mentorship component. Business and entrepreneurship courses are a great fit for mentors because the real world experience that they can share with the students is an added benefit.

Why add teams?

1. Our study showed that teams increase student engagement by 26%.

- Students on teams signed into the platform 26% more often.
- Students on teams (compared with similarly engaged students working individually) are three times higher in terms of forum posting activity.

2. We also found that teams increase student satisfaction with the course by 81%.

- Comparable students on teams were 81% more likely to say that they would definitely recommend the class to a friend.
- Students on teams were 79% more likely to say that they would definitely take another class on the same platform.
- [Estimates are based on regressions controlling for gender, education level, age, number of sign-ins to the platform, number of forum posts and number of videos watched.]

Why add mentorship?

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- Increases student engagement by 37% in terms of forum posting activity and 26% in terms of sign-ins to the class
- Increases student likelihood of completing virtually all assignments and earning a statement with honors by 76%
- Increases completion rates by 38%

Adding Mentors

How do I add mentors to my course?

Potential mentors can come from several sources: former students from prior years, various alumni clubs from your university, your own personal network. If you teach undergraduates, then MBA students could serve as mentors. Local business clubs, such as Rotary, are another option. You want to start with mentors who are trusted contacts and make sure that they are aware of the university policies such as on sexual harassment. (You also want to ask the mentors to not invest in student startups until after the course, as that would introduce a different and unfair dynamic.)

Who would be appropriate mentors?

- Mentorship from those with domain experience in the same industries as the startups
- Consider Three Models of Mentorship - for social networking purposes, learning/skills, information and experience sharing
- Peer mentorship is another possibility

How to structure mentorship

- Having students in teams first seems to help.
- Lay out instructions for the mentors and for the students about expectations and deadlines. Create a mentor handbook (example below) with policies and expectations. Tell students to meet mentors who they don't know by phone, video chat, or in a public place.
- Seed with a set of mentors that you know well.
- Have an assignment where students recruit mentors.

How to win over mentors

- Remind students to please remember basic human courtesy, Business Etiquette 101 and communication skills.
- Mentors are more willing to respond and work with teams that are courteous when they reach out and informative about who they are, what they are hoping to build, and why they want the mentor involved.
- Mentors are not willing to respond to any teams who send a nondescript "will you be our mentor? please say yes" generic message. If you do this, mentors have no idea who you are, what you hope to sell, or what they want from them as a mentor in particular.
- Tell students that as entrepreneurs, a key skill is the importance of communicating the product and/or goals to bring others along and make them interested and excited to be part of the initiative.
- Students should be thoughtful and creative at thinking about who in the industry would be an ideal mentor. For example, they might reach out to a mentor via a friend or sites like LinkedIn and describe why the team is interested in this particular mentor, how their interests are mutual, what they are trying to accomplish (class project etc), the current status of project composition of the student team, and what time commitment they need from the mentor.

Running the Class

In my class at Stanford I assign two mentors per team and tell them that it's about 5-10 hours total over the course of the 10 week quarter. In the case of the online class, obviously we cannot provide two mentors to each of thousands of teams. We may need mentors to coach more than one team if possible. Mentors respond to student questions and give them feedback on their presentations and to the extent they are comfortable they should open up their network a bit.

Opportunity Analysis and Execution Projects

As important as the class lectures are, the most important part of the course is the hands-on, out-of-the-building projects. We organize the class into four-person teams who have to deliver two team projects;*Opportunity Assessment* and *Opportunity Execution*.

In Part 1 of the course, the *Opportunity Assessment* project, students learn how to tell the difference

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between a good idea in the dorm and a great scalable business opportunity. They have to identify and define a market opportunity and pitch the opportunity to their classmates.

In Part 2 of the course, the *Opportunity Execution* project, students explore how you actually assemble a company – thinking through how they would sell, distribute, create demand, attract a team, build and fund their product.

While these two Opportunity Assessment and Execution projects are the core components of what would be a business plan, students are not expected to write a business plan.

For both of these projects it's just fine if the team's analysis results show that the idea is not worth pursuing. The purpose of the project is **not** to come up with a marketable and fundable opportunity. It's to teach them how to *think* about analyzing an opportunity. Additionally, the idea pursued in the Opportunity Execution Project need not be the same as in the Opportunity Assessment Project. If it becomes clear that the initial idea is not scalable, mentors should encourage the team to head in a new direction for the Opportunity Execution Project.

Mentors should guide and challenge students: make them think through the "what if's," and share the mentors' own experiences in businesses that tried various approaches.

Getting Out of the Building

One of the lasting skills we teach the students is that their presentations are simply hypotheses until they actually validate them with customers and partners; and since there are "no facts inside the building, they need to get outside." This means as part of this class for their Opportunity Assessment and Execution presentations they need to talk to actually talk to customers, channel partners, and domain experts and gather real-world data – and given the limited time they have, to do so quickly.

For engineers talking to potential customers or channel partners, this can be a daunting and formidable task. To the best of their ability, mentors should help them network, teach them how to send email and make phone calls and run customer surveys, and share their own contacts with the students if possible.

Methodology

The best practices from this online class are gleaned from data on 26,248 students who took the class. The analysis utilizes a multivariate regression format, where the dependent variables include various engagement and satisfaction measures and the independent variables of interest are whether the student participated in a team of size greater than one, if they worked individually (a team of size 1) and also if they had a mentor for the course or not. The regressions include control variables for demographics such as age, gender, education level, primary language and engagement level on the platform in terms of the number of sign-ins, the number of forum posts, the number of videos watched and the number of hours that the student planned to spend on the course at the outset. The team and mentorship aspects of the course are central to the in-person Stanford version of the class and the online platform allows me to replicate these aspects of the course online.

Overall, 26.9 percent of the students who register sign into the platform only once (when they registered). Another 16 percent signs in only twice. The rest of the students are signing in multiple times, with a highly skewed distribution. One enthusiastic student signed in 898 times during the 8 week course (more than 100 times a week).

Many of the numbers are based on interpretations of the regression coefficients, which depending on the dependent variable were probits, negative binomial or regular ordinary least squares (OLS) regressions. In some cases, the statistics are based on descriptive statistics including t-tests of means across groups. In these cases, there was insufficient data to run a regression, or I simply wanted to see if the basic descriptive statistics supported the regression results as a robustness check. The r-squared on the regressions was typically around 0.118, indicating that there is a lot of variation that is not captured by our key independent variables and controls. This reflects the fact that analysis of online entrepreneurship courses and online courses in general is at the earliest stages and is an exciting research area with many important future discoveries yet to be made.

I hope that this research and other peer-reviewed academic papers and analysis I am doing on this data will represent a useful first step in this direction. Results were checked for robustness using a second class with

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a similar number of students that ran a year earlier. The results reported here are largely robust to testing in this second class and to a number of alternative specifications of the regressions. For more information for interested readers, please contact me at cee@stanford.edu(mailto:cee@stanford.edu) .

More ideas

College business professors looking for more ideas to enrich the classroom experience can find them here (https://eiexchange.com/eix-in-class) .

Additional Search Terms: entrepreneurship courses, teaching ideas, teaching resources, classroom ideas, entrepreneurship classes, business schools, business school classes, entrepreneurship students, professors

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