Startup Health Assessment Using Slack Analytics and Google Trends

December 10, 2018

Summary of Analysis

With strong, sustained user growth, and increasing brand awareness, Lambda School appears to be healthy. If Lambda School is able to successfully navigate its expansion into Europe and generate a strong hiring pipeline, it will be well positioned to scale its operations aggressively.

Lambda School

Context

I am a student at a relatively new program: Lambda School. Part of the Y Combinator class of 2017, Lambda School is a startup that is focused on providing the necessary skills to be successful in several popular tech fields, without the need for a 4-year degree.

While not the first startup to try this (bootcamps have become quite popular) Lambda differs from the bootcamp model is two key ways:

- It offers a full 6 to 7 months of education vs. the typical 3 months of training

- Students pay based on an "Income Share Agreement" (ISA) meaning that there is no tuition up front, and you pay nothing unless you land a tech job paying over $50,000/year

I found Lambda School while looking for a Data Science masters program. I was skeptical both about the model (too good to be true) and the education (is it really an education if it's not delivered by a university?).

Luckily, Lambda operates with fairly radical transparency.

Students will readily speak with you about their experience. The ISA is in plain language with additional videos to clarify any possible ambiguities. The Data Science program also required that you try before you buy.

Before being admitted, you must complete a 2-week introductory program. You spend your evenings attending live online lectures, completing challenges, and interacting with staff and other prospective students.

It was some of the best instruction that I had ever encountered.

I've now completed 5 weeks as a full-time student, and it has continued to meet or exceed expectations. Which is why we find ourselves here today.

Questions to be investigated

Is Lambda School actually going to be around next year?

I like Lambda School. But I also know that most startups fail. So, I took it upon myself to see just how worried I should be.
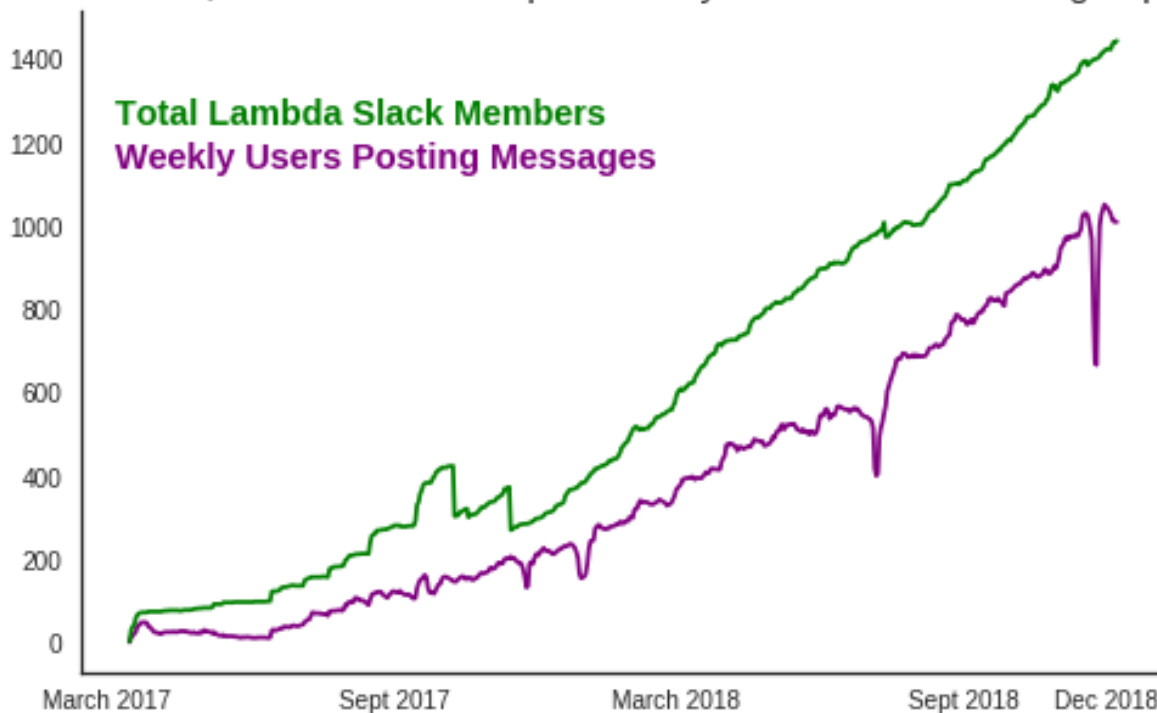
Risks:
1. Lambda School takes a serious risk by spending up front on students. Put simply, they won't see a dime from me, or any other student, until they've fully delivered their product.

2. For Lambda to make money, students must be placed in jobs. For employers to hire students, the curriculum must be rigorous. Could 6 months of difficult coursework drive high attrition rates? Can Lambda survive this attrition if it's happening?

3. Lambda is a newcomer to a market that has existed for at least a few years. Can it actually find traction?

To address some of these risks, this analysis will examine growth, attrition, and brand awareness using Lambda's Slack analytics, and Google Trends for Lambda and two competitors.

Growth

Lambda is demonstrating consistent growth

Over 1,000 members now post weekly in the Lambda Slack group

Total Lambda Slack Members
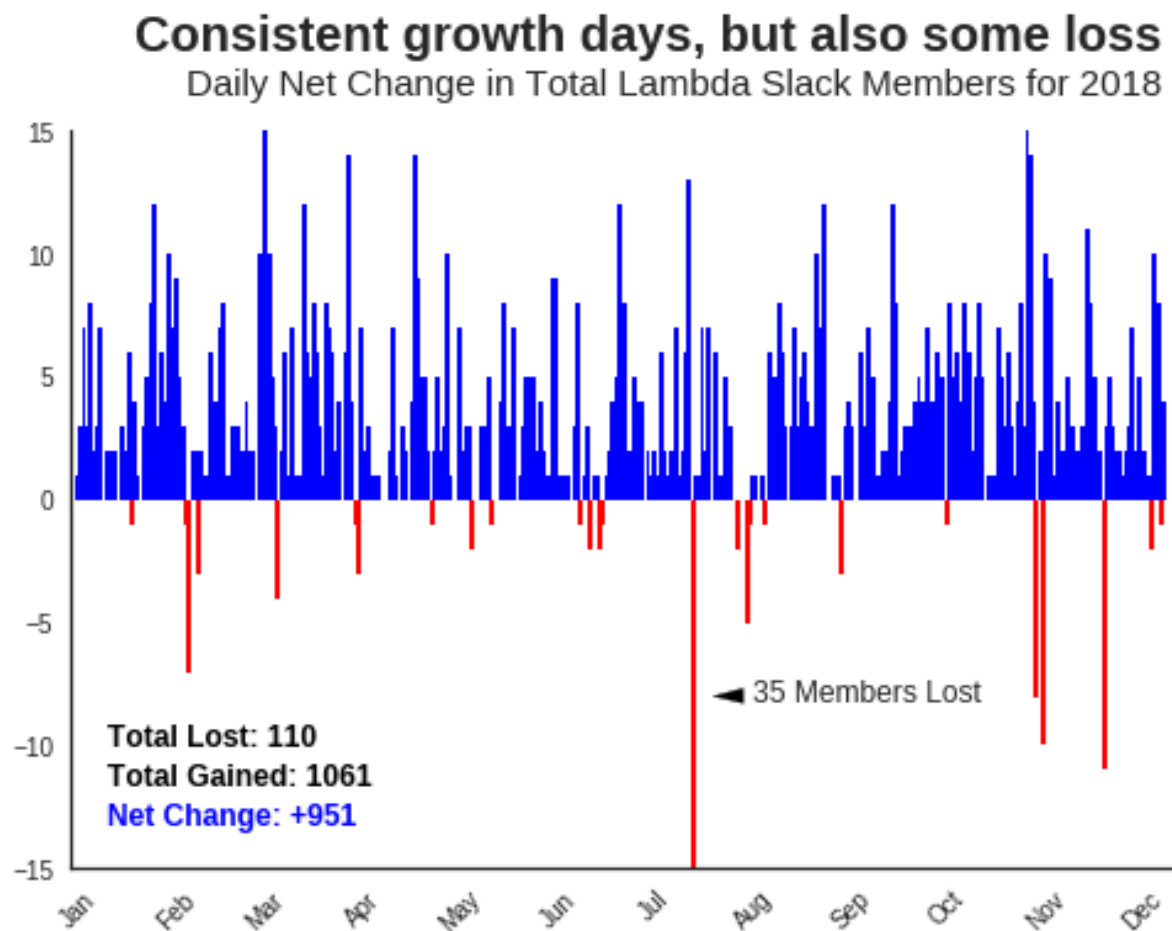**Weekly Users Posting Messages**

Lambda's growth looks strong. This shouldn't come as a surprise to any students, but from the outside you can never be certain. Beyond the magnitude of growth, we can also see that the growth is consistent.

This is important for a startup that wants to maximize its chance of sticking around.

Consistent, linear growth is the sort of growth that allows you to work out the kinks in your business processes and your team. This is the sort of early growth that sets the stage for the almighty hockey stick curve.

Consistent growth days, but also some loss
Daily Net Change in Total Lambda Slack Members for 2018

There are clearly a couple of spots on the previous 'Total Members' curve where numbers dip. The above chart is a granular examination of net user change.

Gain and loss are calculated by taking the total members for one day and subtracting the number of members from the previous day. This means that some days may have involved losing members, but if more members were gained, it would still show blue.

It is important to keep in mind that not everyone on the channel is a student. There may have been temporary visitors, old staff accounts, or accidental duplicate accounts that were added or removed.

Attrition Discussion

On the whole, this looks like fairly reasonable churn.

I would be concerned if Lambda was losing a large number of members. I would also be concerned if Lambda didn't lose anybody.

Lambda could conceivably reduce churn by creating filters like degree requirements and previous experience, but this would negatively impact their goal of making tech education accessible.
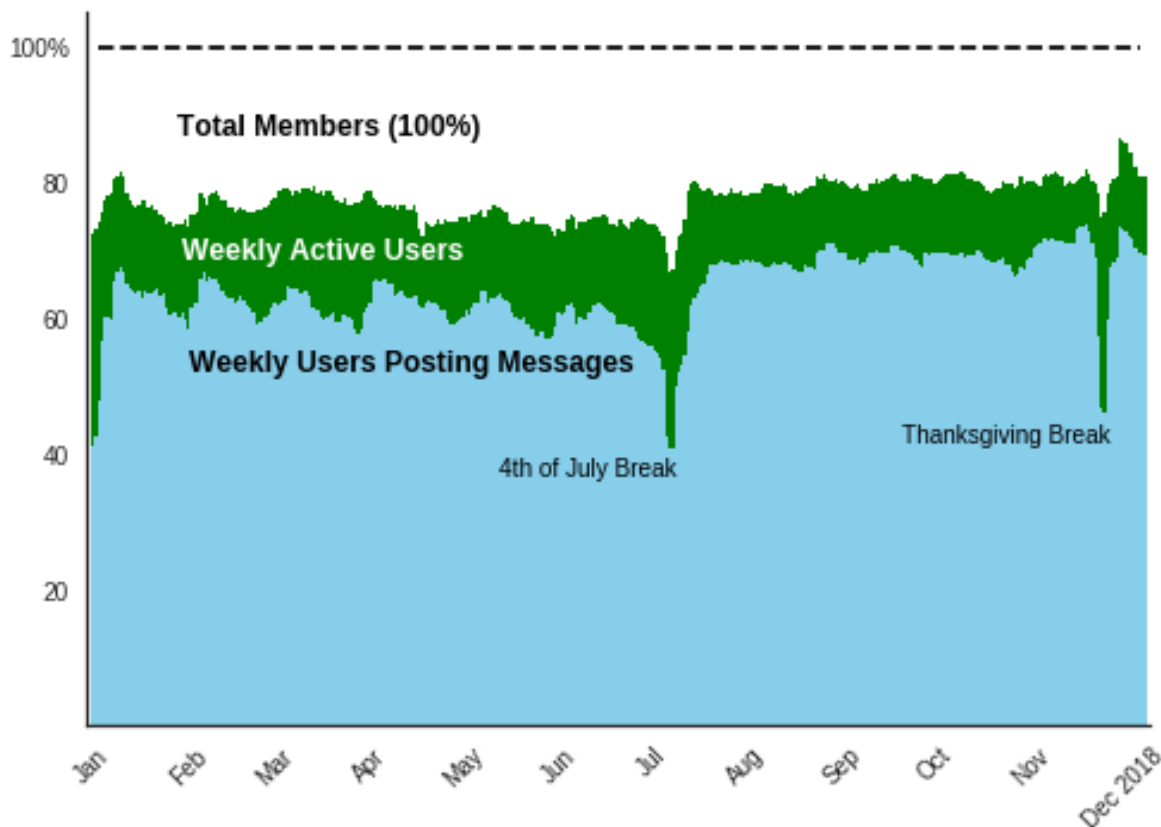
By taking a risk on non-traditional students, Lambda School will see some mismatches, but also create opportunity for hundreds of people who wouldn't have it otherwise. It also expands their pool of candidates dramatically.

Lambda could also reduce churn by reducing rigor, but this would harm long term job prospects for its graduates, and in turn reduce revenue.

Engagement appears to be increasing
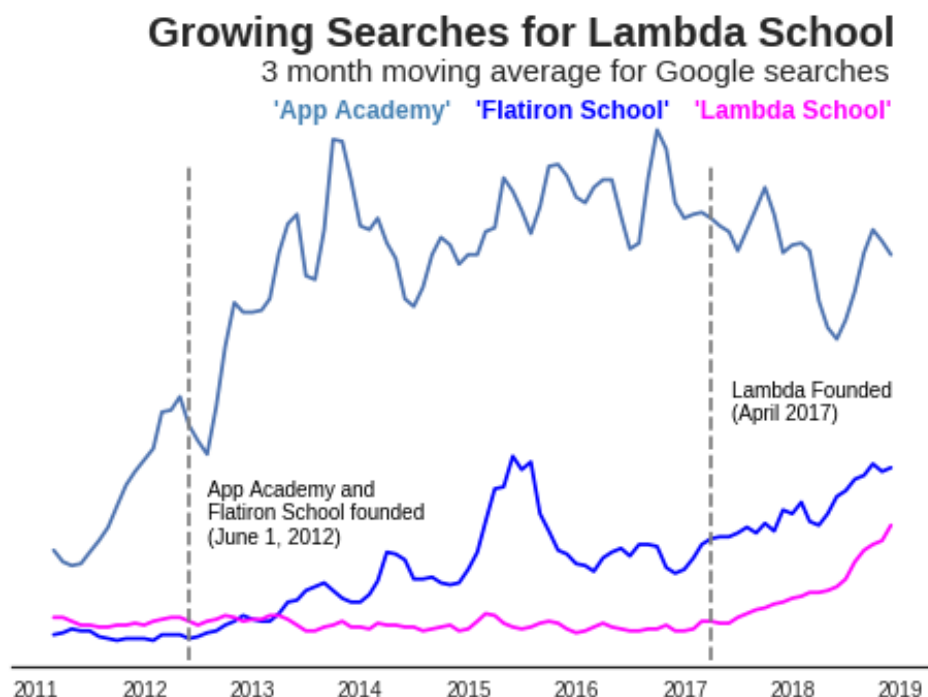### A greater percentage of members are posting vs. only observing

The above chart shows activity levels relative to membership.

We can clearly see that upwards of 80% of the members are actually active in recent weeks, and around 70% of members are posting. I'm not certain what to make of the difference in active users to posting users, but I do have a hypothesis.

Lectures and standup meetings happen over Zoom video chat, and assignments are submitted via Github. More privacy-minded students may prefer to limit written communications when possible.

In any case, we can see that engagement has increased since July 4, 2018. This could be any combination of more written student communication, more staff members communicating via Slack, or more alumni engagement. These are generally positive signs.

Competition and Branding

Growing Searches for Lambda School
3 month moving average for Google searches
'App Academy' **'Flatiron School'** **'Lambda School'**

Lambda Founded
(April 2017)

App Academy and
Flatiron School founded
(June 1, 2012)

2011   2012   2013   2014   2015   2016   2017   2018   2019

Given the number of competitors already existing in the market, it is reasonable to wonder whether or not Lambda is gaining any visibility. It is possible that the increase in students reflects people being admitted from a wait list that was generated by fleeting publicity.

These final graphs look at how Lambda School is faring relative to two incumbents: App Academy and Flatiron School. The data is from Google Trends. The Y-axis represents the number of searches relative to the largest volume search day for the time period. App Academy's highest volume search day is our "100%". Every other point for all searches is a fraction calculated from that number.

I have used a 3-month moving average to smooth the lines and shower clearer trends.
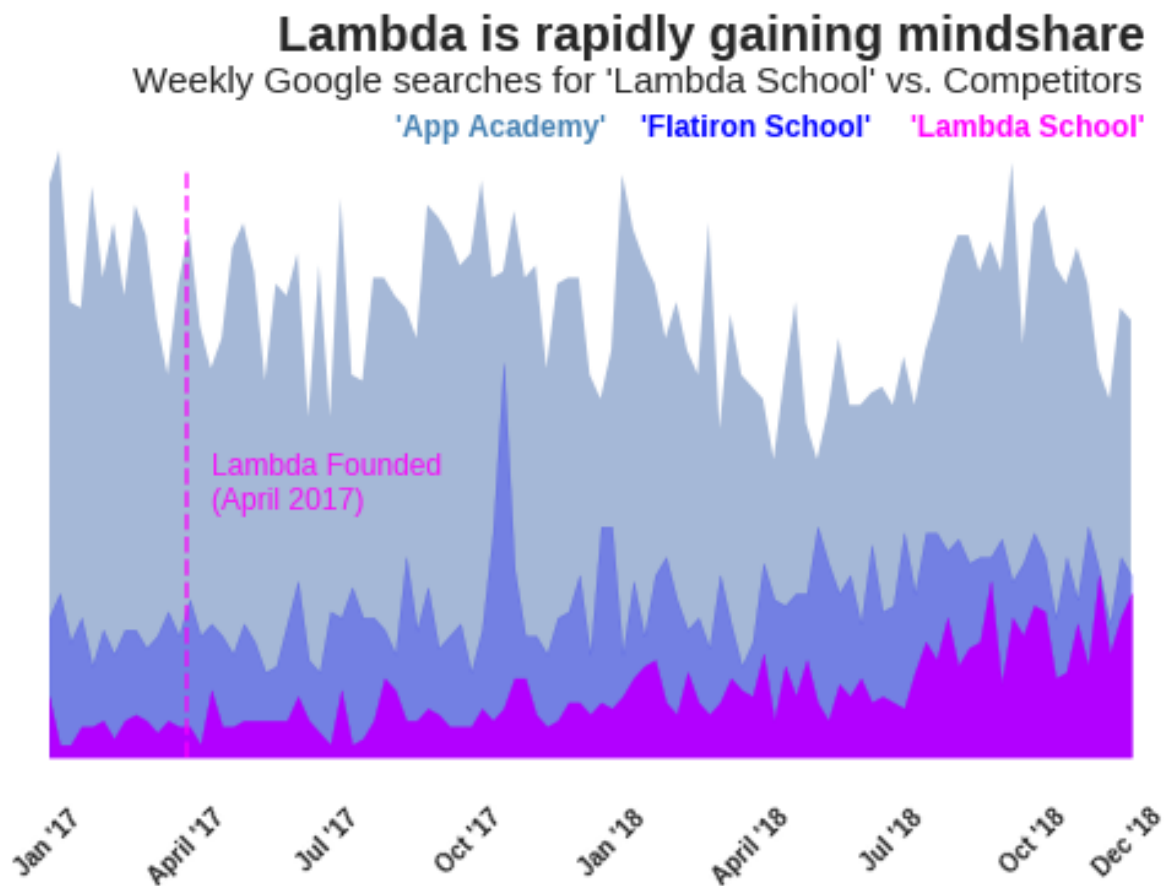
We can see that Lambda is both much newer and gaining quickly. Flatiron school is also making recent gains after a slow 2016.

App Academy is not sharing the same recent growth in interest. While more investigation is needed, this could indicate that the popularity of Lambda School as a search term is not due to a sudden increase in interest in all "bootcamps".

One other interesting observation from this chart is that "Lambda School" searches existed steadily prior to Lambda School's founding. This appears to be due to the Lambda School of Music and Fine Arts, which is unrelated.

Competition and Branding

Lambda is rapidly gaining mindshare
Weekly Google searches for 'Lambda School' vs. Competitors
'App Academy' **'Flatiron School'** **'Lambda School'**

Lambda Founded
(April 2017)

Jan '17 April '17 Jul '17 Oct '17 Jan '18 April '18 Jul '18 Oct '18 Dec '18

It is worth narrowing the time frame to get a better look at interest in Lambda School. The above is the same chart but starting in 2017 and using weekly data. The results are overlaid, not stacked.

We can see that searches for Lambda School have begun to eclipse searches for Flatiron School and are making sizeable inroads on App Academy. This is a good sign that Lambda School's brand is becoming more established in spite of the competitive landscape.

Conclusion

Lambda School is demonstrating sustained user growth and increasing engagement. Attrition appears to be small in both absolute and relative numbers, but not so small as to be suspect or detrimental. Brand awareness appears to increasing rapidly. While Lambda School is still young, and health assessments for startups are incomplete at their best, the available information suggests that Lambda School is "Healthy".

If Lambda School is able to successfully navigate its expansion into Europe and generate a strong hiring pipeline, it will be well positioned to scale its operations aggressively.