

# a16z What's Next for Education Startups

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## SUMMARY KEYWORDS

learning, education, people, platform, china, mobile, ads, teacher, taobao, asia, app, connie, content, ideas, self improvement, machine learning, courses, building, youtube, monetize

## SPEAKERS

Frank Chen, Connie

### Frank Chen 00:08

Hi, this is Frank Chen. Welcome to the a16z podcast. This episode is part two of a series called What's next for education startups. It originally aired as a YouTube video, and you can watch all of our YouTube videos at [youtube.com/a16z](https://youtube.com/a16z) videos. Hi, this is Frank Ken, welcome to the a16z network. Very excited today to share a conversation I had with Connie pan one of our general partners. Connie is one of the world's experts on trends, especially consumer trends in China and Tech. And today we're going to talk about the future of lifelong learning and she's going to share a few examples of very awesome startups. In China. She's super interested in what's happening with Gen Z consumers. She's very interested in real estate and how people are finding homes preparing their homes to be listed on Airbnb, renting homes, so on and so forth. She's also very inspired by things that entrepreneurs are doing in China that might have applicability here in the United States. She helped us find our investments in line and Pinterest, and I think you're going to have I think you'll really enjoy this conversation that I had with Connie and I have to tell you a funny story before we get started. So we did not synchronize our sweaters. We've known each other so long. We just knew to come in the same color family. So Connie was my first hire at Andreessen Horowitz. The Adam Rifkin introduced us to Adam at one time and may still be the most connected person on LinkedIn and his whole heart and mission is to connect people and so when I told Adam I was looking for the best deal partner ever, he went and found it. And I'm so thrilled that you've been here for so long and now are a general partner looking to make investments. So welcome

### Connie 02:05

Thank you. Thank you.

### Frank Chen 02:06

So today we're gonna talk about, we're gonna continue our series in education and talk a little bit about ongoing education and we're so excited about the things that we can do as adults to continue to learn new things and for those of you that know me like learning a new thing is my favorite thing in life. So I'm so excited about this episode. So Connie, why don't you set the context and let's talk a little bit about the things that are working, especially in China and I thought maybe it'd be good to just anchor on how much money and how many users people spend on adult education because this is very surprising.

**Connie** 02:41

Yeah. I think about education and learning in a way that goes well beyond K through 12. So I'm actually hyper focused on education for adults, people once they have graduated college. How can they use online education for self improvement for example, and if you look at the dollars abroad, I do a lot of studying what's working in China and working in Asia to give me inspiration for ideas here in the States. That's a massive market in Asia, it's massive in China. And I think it's because China has developed all these online education platforms that are specifically made for mobile that unlock all these other new features and benefits. And in terms of how big it is. I research says that right now online education in China has 150 million users, and expected to grow to nearly 300 million by the year 2020. That's a \$40 billion industry, expected to grow to \$70 billion. Of course, this is a very broad categorization of what counts as education. But what's interesting is the way that these research reports break it up. The largest group is not K through 12. It's not even college students, the largest groups of students who want to do self improvement and online education, they are 26 to 35.

**Frank Chen** 04:02

That's super interesting. So you would expect sort of the Asian cultures that the parents sending their students to, you know, after school enrichment programs, and so you think that's where all the money is going, but you're saying, look, it's after they graduate college. Right,

**Connie** 04:15

right. And I think that's because if you take the word education and you expand it just to self improvement, self learning, then it greatly increases the demographic that you can address. And yes, a lot of people will just say China education. It's huge, because parents spend so much money, on tutoring, and so forth, because of the way the college system works. But most of that money is actually going through post college graduates.

**Frank Chen** 04:42

It's really interesting, because in China of what's already happening is what we sort of expect to happen. Here, which is today, we have the system where sort of you go through K through 12. And then a subset of those people go to college and then basically at age 22, you're done. There's no more formal education and now it's basically the workplaces job to train you, right? They'll send you to classes and so on, and we know that's going to change we know that the world is so dynamic now that you can't learn everything that you need to be a productive worker or citizen by age 22. You're going to have to learn ongoing and this is sort of a big part of our investment thesis behind Udacity.

**Connie** 05:19

And there's a bunch of courses that a college curriculum will likely never include like how to conduct ourselves out of meaning, how to speak publicly, right? Right. How to how to like train your kid that counts is education, parenting courses that counts as education, even remember, cover that stuff in college.

**Frank Chen** 05:35

Yeah. And in addition to sort of the Evergreen stuff that you mentioned, like, you know, everybody needs to be a good public speaker. Everybody needs to know how to be. There's also sort of topical things that emerge as marketplaces emerge. So I'm thinking about the Taobao sellers, right? So Taobao was like eBay here. And what happened in Taobao was there were sellers who were experimenting with the system, and they kind of figured out what was working for them. And they would share online and in videos and Taobao saw this happening, and they're like, oh, let's actually get behind this and push right let's set up Taobao University, where we can take our very best sellers and actually have them make money from their content, not just their markets. Yeah, completely. So awesome. So why do you think this is happening already in Asia? Why are they ahead?

**Connie 06:25**

I think Asia is in general, much more mobile first, and mobile only have an environment in the States. Meaning that if I asked you to go buy a pair of shoes, you i nationally flocked to your computer to get the best user experience. But in Asia, you pull up your phone and you'd open the team or the tableau app. And the idea that your PC and phone are completely interchangeable and you can completely rely on your phone to get you everything you need is more prevalent in Asia. There's also more mobile payments and the idea of paying on your phone is very natural and common to people not just in tier one cities but across the country. But I think there's three core breakthroughs and insights that Asia has really figured out that has propelled us education work, it's so much more forward. The first one is that they rely on artificial intelligence and machine learning and in a much more interesting way. So that allows them to unlock products and features and and just ideas that I don't fit here in the state. So for example, there's this company called lingo champ and it teaches in English. And typically when you look at a language learning app here in the States, it's very flashcard driven, or it will give you a sentence and you can read it. But in Asia they realize that people want to learn English not just to be able to read and write but more importantly to have conversations and be able to visit the world to interact with other people. And so they use the mobile phone and the microphone to allow you to speak directly into the app and read out sentences and actually carry on conversations with a computer that will speak back to you. And that kind of scoring using machine learning and artificial intelligence allows people to learn pronunciation with a standalone mobile app, and I think that's a fantastic example of like leaning into artificial intelligence and machine learning to dramatically reduce the cost of this company lingo champ their gross margins are over 70% Because the teacher costs

**Frank Chen 08:35**

right so nobody has to sort of say oh, that's a terrible accent. My Funny story on this is when I was learning Chinese Mandarin, my Mandarin teacher said, asked me one day are you from Hong Kong, which for those of you that don't realize it is probably the most grievous insult that you could hurl at somebody trying to learn Mandarin because it's so bad. So, so you're saying look, they didn't have to have a teacher listening to you and then giving guidance. They're using the machine learning to say you don't sound like a native and here's where

**Connie 09:02**

right and because their gross margins are so high their price point is so much lower than having a real life tutor or even an online course instructor tutor with our price point is so affordable that people all around the country can access it. And that same concept of leaning into machine learning is also true

and music as another category. There's this company in China called VIP piano and piano in in China. In Chinese translates to, they will practice piano or practice an instrument alongside you. And what it is is a mobile app which has a piano teacher. And this app, you put it on the stand and you attach it to your piano and this teacher can help your kid age five through 16 learn an instrument they do piano violin, a bunch of classical Chinese instruments. But again, it's that price point that they're able to unlock. Because for a lot of these music instructors, so much about cost as in their travel time, or because you're living in a city where the cost of living is just so high, but now in China, my teacher doesn't have to live in Beijing. They don't have to live in Shanghai, they can live anywhere in the country. They don't even have to live in China. Right. And then not only is that the case they use the machine learning aspect to help the teachers with scoring the kids and scoring the performance because of music. Just like with language there is actual pitch there is an actual tempo and actual rhythm that you're supposed to play. Right so they can take the composition score, and then hear your actual performance and give you a grade, which then allows one teacher to teach two or three students at the same time, which that alone is even more cost savings, allowing more parents to give their kids face music lessons that they would typically not be able to afford.

**Frank Chen** 11:04

I'm flashing back to my piano learning days and I'm hearing that too fast too fast. Right? So now we can do that with machine learning.

**Connie** 11:13

Right and imagine being able to do that during practice sessions, right and having that information sync up to the teacher. There's just a lot more we can do with machine learning, especially when it comes to language and music. That is still I think, very untapped here in the west.

**Frank Chen** 11:30

So let's talk a little bit about sort of the efforts that we've sort of seen here and sort of how you think we get from here where we are so we have learning platforms like masterclass we have learning platforms like Udemy we have learning companies like Udacity, one of our portfolio companies. What's sort of missing from those that sort of the next generation of ad tech startups you're looking for? You think we'll have?

**Connie** 11:53

Yeah, I think the answer is one word. It's mobile and the reason is because mobile only isn't a society that I think is inevitably in our future. And when you have mobile that allows for all kinds of different things that allows again for microphone input as an example. Everyone has a camera or front facing an about facing camera on our phones, which allows for different kinds of input and interaction with a platform. Mobile allows you to have these bite sized snacks rather than opening your Instagram newsfeed. Maybe you can take a three minute class or a five minute class whenever you have downtime, and also Mobile allows people to not feel like you have to be confined to a video format. And I think this is really critical because a lot of long tail expertise doesn't always naturally sink video. For example, you can be a math teacher and yes, you're writing formulas on the board or you can be a philosophy teacher right and you can be sitting there giving a lecture just sitting there. Or that same kind of content can be also conveyed through a podcast or an audio format. And once you're focused

on lowboy are not thinking like it has to be video has to be full screen immersive. That now can also be a podcast that you listen to when you're driving to work when you're walking to work. And again, I think that that expansion of formats is really obvious once you make something that is mobile centric.

**Frank Chen** 13:30

So we haven't seen the class of mobile first ad tech that you were expecting to see, which is pretty surprising, right? It's sort of it is sort of an obvious insight once you say it out loud like you did. And so,

**Connie** 13:42

and I think I think the reason is because so much of Ad Tech has been either you pay this one time very expensive tuition. Or honestly, it's ad based, right? Like YouTube is the biggest university in the world. And most of the creators are monetizing through advertisements. But because it's ad based, a lot of the content on YouTube can't go to the depth of expertise that you need to really make a big impact on your life or your career. Because the creators, they have these incentives to have to create content that gets lots of clients. And the reality is a lot of self improvement, lifelong learning content is not all clickbait content, right and to go into that depth of what you need to know, ad format is not the best way to compensate these creators. So for example, if you're buying a house for the first time, you need to understand how to think through that transaction. It doesn't make sense for someone to create these ad based videos because one, they're not going to get all the clicks. They need to justify their time and expertise. But I mean, imagine a platform where someone could package that in 2030 courses it could be a mixture of audio and PDF, video, a live structure when a paid one on one consultation and put that all in one format or that creator now can make much more money and have the right incentives to create deeper, better content.

**Frank Chen** 15:14

So that makes perfect sense, right which is it takes a lot of work. To create this content. And if you're monetizing with advertising, that means only the top 1% are going to even break even or barely breakeven on all of that effort, right? Because you need to attract 10s of millions of people

**Connie** 15:29

as reward production value. Right? So you need the great videographer and you need to spend an hour on your YouTube thumbnail. That's not right, right. Because honestly, a lot of these great experts, a lot of these professors, these doctors whose nutritionist, they are not media experts, right? And the fact that they have to go hire videographers buy very expensive equipment cameras lighting, what have you learned how to edit videos themselves for the first time, not not long term, I think going to work because these creators are being underpaid for their knowledge.

**Frank Chen** 16:05

So as I think about my own sort of ongoing education habits YouTube has definitely become one of them. Which is to say I'm watching TED talks, I did something over the holidays, which I'm very proud of which is I placed a doorknob. And I'm proud of this because I'm like the least handy person I know. And so I watched a YouTube video and went to Home Depot and in my in laws house I replaced the little doorknob mechanism. Yes I did it. And so you're saying I should do that. But I was like giddily proud of myself. Because like I'm a software person, and that was definitely hardware. Okay. So

anyway, thank you for indulging my burst of enthusiasm for myself there. So you're saying look, that type of content that's fine. For YouTube because like that's super easy, right?

**Connie 16:50**

Find your videos. Which part to change out which email to take out.

**Frank Chen 16:56**

Ads for that makes sense. But it doesn't make sense for this sort of highly produced package where I'm teaching you something. That's a more serious life skill,

**Connie 17:03**

right? I mean, like TED talks are fantastic intro course as a first great lecture. But there should be 10 lectures beyond that for every topic. Right? Right. And a lot of things that are skill based in particular, I think deserve having title courses, 20 courses, 30 courses, so on. Yeah, and there's a lot of things that I wouldn't be willing to pay for I love to pay to figure out how can I improve my voice I would love to pay to say, how can I improve parenting and so forth. And there aren't great platforms right now that make it as easy as creating like a Shopify website. For these creators to monetize their knowledge. And these creators, typically one they're not media experts, to they're not technologists, so they don't have time to build their own blogs or their own websites and integrate PayPal or credit card payments into them. And the biggest problem is they're truly underpaid right now for the knowledge that they're freely sharing on YouTube.

**Frank Chen 18:04**

If you think about sort of an example that is in this ecosystem, you think about masterclass, right, where the entrepreneurs do a great job of sort of hoovering up all of the top experts in their fields. And I think part of the reason he went top down is sort of the same reason that Elon Musk went to the the Roadster first and then the x and then the or the s and then the x and then the three rights are He's working his way down. And I think part of that is because I wonder if there's enough cultural support in the West for paying for education of this kind, right? So it sounds like in China, you already have that cultural support. So like what is education amongst household expenses? Is it like number three or number four after housing and medical? Right, so you have this in bread, sort of support cultural support. Like of course, I'm paying for education, right. And so it once mobile, sort of content sources sprung up, the money just went right. And so, what do you think is going to happen here? Do we need more cultural support? How does that interaction happen?

**Connie 19:08**

I think the way that way Silicon Valley and platforms can help encourage this shift for lifelong learning and self improvement as is really breaking away from just the app based model and finding the right incentives for creators to be able to monetize because I think a lot of creators when they have an ability to make a significant amount of income from sharing their expertise, they will create better content. And as there's better content out there, users will say, Hey, this is a fantastic way to put a small investment into myself. Right? And right now, the platforms I think are not doing enough to help those creators monetize. For a platform that doesn't just mean changing their business model. It also means monetizing their own brand and becoming a mainstream app and mainstream website. And that's really



important because for a lot of these platforms, they shouldn't have just one teacher teaching you how to sing. There should be 23 teachers, and then there should be rankings based off of student reviews or based on people who actually completed the course. Right? And repeat students and so forth and all those things should help bubble up. The best teacher and these platforms to do a lot to invest in building out their own brands to become mainstream in order to do that. And, and I love the master class content. I think once they expand, they're going to have to include more teachers for the same how

**Frank Chen** 20:39

to go down and market it doesn't have to be Steve Martin teaching you how to do comedy. It'll be your local comedy genius. Okay, it

**Connie** 20:45

could be all of them together, right? And they could be priced at different price points. And then when you go the level beyond Steve Martin, you can have them ranked differently. Right and I love to be able to figure out what are their rankings what classes that people finished? What are the rankings where people get the highest reviews? Right? What are the rankings based off price, what have you, right? And all of that kind of data is totally presentable right now, it's just not being surfaced by the platform.

**Frank Chen** 21:17

Another sort of age old challenge in sort of building these pervasive education marketplaces in the past has been you sort of have very broad categories of education there, sort of, let's call it hobby entertainment, right? I'm learning the piano, I want to sing better, right? And then there's sort of business self improvement. Like I want to learn how to use Excel better or I want to be a better offer up seller or something like that. So do you think that there's going to be one platform that sort of wins both. Do you think there'll be more specialty things that sort of cater to each of these because it feels like they have different dynamics?

**Connie** 21:50

I think it's possible but it's unclear how the future will shake out. I mean, for example, I think there's a lot of great workout apps today already, right? That put a bunch of fitness instructors or nutritionists up against each other and you can choose which instructor you want. And they have that category down pretty well. But I also think it's very possible if there was a platform that created the right tools. I know this like Shopify in a box, where I can say here on my podcast, here are my blog posts. These are the times where I'm going to do a live stream q&a. This is the PDF of the book I willing to sell. Right? If it gave creators these options to says turn on these modules and create their own knowledge store. I think it's possible also to have one major platform as well,

**Frank Chen** 22:41

but serves both sort of the hobbyist entertainment market as well as the serious self improvement market and it's possible it's not

**Connie** 22:48

an in the startup can eventually be something that YouTube goes into or something that Twitter goes into Twitter has a ton of influencers too and lots of longtail experts. But I think the opportunity is still there is still so early enough that a new startup could take it.

**Frank Chen** 23:06

Great. If you were to give, if you had one or two pieces of advice that you have for entrepreneurs in this space, what would it be?

**Connie** 23:17

This is probably contrarian, even in Silicon Valley, but I would build for mobile first and I won't build your app before you build your website because a lot of drastically unlock different ways of thinking. You will be able to use your GPS, your microphone, you'll be able to use a camera. And if those new additions or features don't help you brainstorm new things but not a problem. You will be able to use in app payments, right? You might be able to use Apple Pay and so forth. So I think one big thing I would say is if you're building for the future, consider building this platform first on mobile even before you go to the PC now I know that's a very contrarian view. Because a lot of investors will also say Go Go to the PC first, get your brand and then go to the app. But I think when you start at least brainstorming at the very least on a mobile platform first it unlocks this idea. How can I use a microphone differently and then now that I have microphone and audio and Pat, how can I use machine learning differently? Right and that allows you to unlock ideas like the lingo champ for English learning, or like Pay man for piano teaching, that honestly someone building for a PC will never get to that insight Right,

**Frank Chen** 24:35

right. And then presumably, your next piece of advice would be experiment on the business model, right? So we've got mobile, we've done machine learning, and now it's like let's do something other than ads.

**Connie** 24:45

Yeah, for sure. Yeah, for sure. I am not a fan of strictly ad based models, mostly because the ones that do succeed, say like a Facebook or Google. I mean, the reason their ads succeed is not because of the mass of pageviews. It's, it's also because of all the information they have on that user. So the ads are highly targeted. Right? And if you're a platform where you don't have such detailed information, on our end users, your ads are not as valuable and they're not going to convert as well. So focusing on just building up pageviews and hoping to monetize with ads to me is a scary strategy in general for any consumer app. Yeah. But I think business model experimentation and education space is huge because I mean a lot of these categories like your skills for door not right. Maybe it could sell you you know, similar doors, sold me on our door mouse I should have sold you other home projects that hey, if you take this course, buy the components for at a discount, and that can be a partnership with their local Home Depot, because geographically they know the local Home Depot it's only two or three miles away from where you are. Right and and those ideas are very possible and not being implemented today. Kind of thinking if this person learned this course, what else can I follow? Beyond just another course? What physical things can I sell them? What other services can I sell?

**Frank Chen** 26:16



It seems inevitable that as we continue into a world that rapidly changes therefore needs new skills all the time, that the spending pattern here on education will flatten right, which is the way I think about education. Spending over a lifetime today is kind of like there's an elephant inside of Python, right which is you spent a lot of money and then you get to college, right where you have the 529 plan right to help subsidize my tax deferred dollars to go to university. And then basically it drops to zero, right? It's sort of like a very small proportion of the population spends money on ongoing training. And if you spend it, it's mostly like, oh, work had me do it. And then I expensed it, right, but it's nowhere approaching college tuition. So it's sort of this big sort of college expense in the middle. It feels like as we move into a new world, like we want to flatten that out, right. We want to give access to piano teaching for kids smooth it out earlier in life, and then we sort of smooth it out later in life too. And that's going to require this business model. Experimentation,

**Connie** 27:16

business model experimentation and just making that information more accessible. Like if I told you, you could spend \$15 and get 10 courses on how to improve your voice. Would you consider it I am looking for voice instructors right now. I'm paid far. More than that. But I feel like so many of these ideas or just people oftentimes just forget that they exist because it's not so in their face, and it's not also done or bite sized snacks, on their own schedule on their own timeframe right and when you're on a mobile platform when you're doing these bite sized lessons. You can do it every morning.

**Frank Chen** 27:59

Yeah. Well, I personally can't wait for a lot of this stuff. As I mentioned, I love learning new things. And I can't wait to have very compelling products that are teaching me new things a little more sophisticated than how to replace a doorknob. Maybe a little less than

**Connie** 28:14

should have also sold your services as a handyman nearby in case you fail. That's true, right? There's just so many ways you can monetize a simple video like replacing a doorknob or it's not done today. Yeah, yeah, totally true. Like all these how to hold back says a good chunk of people who attempt them can't do it right. And they're willing to

**Frank Chen** 28:35

give up in the middle surrounded by an explosion of tools, right? I give up

**Connie** 28:39

right? Or I'm maybe missing this part. Maybe I'm missing this wrench, right power turtle. Right? Right. You could have done this and half the time if you had this power shot. These ideas aren't being thought of right now. Because of the business model innovation, right? Think about not just selling them the next course and stuffing more ads into your courses and therefore making your video much longer than it needs to be. Which is the game that a lot of these influencers have to play. They're being forced to play their game right now. Give them better ways to monetize what they're selling.

**Frank Chen** 29:11

Yeah. And that business model would be good for because another age old problem with these education markets that places that try to get broad, right I want to have all of this content is that the repeat usage is never as good as the entrepreneur hopes right? So you kind of hope that I sell you the piano playing class and then you'll come to me for filmmaking or whatever it is. And it turns out in a lot of these, that you're almost capturing that customer again for the first time, even though they bought a class from you, right?

**Connie** 29:40

Yeah. And so that's pointless actually, I want to say I never found a subscription models, but for this category, I don't think subscription is necessarily the best model. Because for me to sign up for a subscription. I have to think I'm going to take more than one class. I mean, why not? Instead, let me pay per course. And for other courses, if you want to push discovery, allow me to sample the first 10 minutes of a class for free, right or do some other kind of incentive to get me to see the value. And then maybe after two three courses, then sell me something like a subscription where I'm like, Yes, for sure. I'm gonna use this multiple times over. But the idea of jumping from day one to push your subscription, I think is a hard business model for this category.

**Frank Chen** 30:28

It's hard to hit you have to capture the people who would pay up front for health clubs, right, which is sort of it's the aspirational me that will go to the gym all the time. Right. Well, thanks for joining us. We're so excited for the future of edtech that is mobile first and AI enabled and isn't just advertising because I want to learn new stuff. I want to learn it all the time. The next thing I think in our house will be clearing clutter. And so it's funny. Marie Kondo has that series on Netflix now and so maybe I should watch it, and maybe there will be a tailor made startup for that type of stuff. They can offer me help when I get stuck clearing my own crap. So All right, thanks, YouTube. We'll see you next episode. If you liked what you saw, go ahead and comment and subscribe on the bottom. And we'll see you next episode.