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# *HOW EDUCATION ESCAPED FROM THE CLASSROOM*

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Interview with Thaiha Nguyen

MB Malcolm Borthwick

TH Thaiha Nguyen

MB Hello and thanks for joining us. I'm Malcolm Borthwick, editor of Intellectual Capital at Ballie Gifford

If something is scarce, it's usually valuable. That benefits whoever is in control. But if it becomes abundant, things change. Think what happens, for example, to oil and gas producers when you get your power from renewable energy, or cinema owners as you stream the latest films into your homes.

Learning is another example. Universities and schools have taught classes in a standardised fashion for centuries. A teacher in a room delivers a set course over a set time to a small group of students. But now technologies, in the form of the internet, AI and apps give you other ways to learn.

To discuss some of the companies transforming education, I'm joined in our Edinburgh studio by Thaiha Nguyen.

She's an Investment Manager involved in the Keystone Positive Change Investment Trust and the Positive Change Fund.

But before we start the conversation, some important information. Please remember that, as with all investments, your capital is at risk and your income is not guaranteed

Thaiha, thanks very much for joining us in the studio. It's exciting to be here in the Edinburgh studio and this is our 25th podcast. So, thanks for joining us on *Short Briefings on Long Term Thinking*.

TN Thanks, Malcolm. It's definitely my pleasure to be here and I can't believe that it is the 25th podcast already, so it's definitely a great honour.

MB Thanks very much, Thaiha. If we could just start by setting out what the problem



is here and the solution that is being provided.

TN Education is a very broad area, so let me focus on higher education only for the conversation today. I think for learners in higher education, the motivation to study beyond just pursuing new knowledge is actually to earn a better job and high income in the future, that's the economic motivation.

That is why education has a signalling purpose. It signals the employability of learners and that is also why credentials are so important. For a long time universities were the monopoly of credentials and education is a scarce resource and, like you said earlier, if something is scarce, it is expensive, and that is true in education.

There is just a limited growth in the supply of higher education because university teaching is not scalable. For decades the classroom only can hold a certain number of students and the teacher's capacity to teach is only confined to the size of that classroom, but at the same time you have increasing demand for education.

That has caused and escalation in cost and, in fact, if we look at the US college tuition fee, then it almost quadrupled since the 1980s compared to just the doubling in healthcare costs. So, what I see as a challenge to our education system at the moment is that you have a very high cost for education and a system that is not scalable, that is not accessible for everyone.

MB A system that is unscalable unless there is change, by the sounds of things.

TN Yes. I think when there are challenges it is going to spur innovation. I think what is happening in education at the moment, is that education may become less of a scarce resource over time and there are two reasons for that. I think the first one is that universities may no longer be the only credential providers anymore. Why is that? Because if you think about it the world is changing really fast with rapid technology development and universities are struggling to keep up with the contents that make their students employable.

What happened is employers are now directly joining the market to fill in that skill gap themselves. Companies like Google, like IBM, like Microsoft, etc, have launched and taught their own degrees that are now considered equivalent to university degrees. And increasingly, universities are adopting those courses developed by employers into their own curriculums.

The second thing I think is changing is the distribution of education, and here I'm talking about the internet and online education. If you think again, the cost of giving an online lecture to an extra student is virtually zero and so, like everywhere else, across the economy, the internet has a powerful deflationary impact, which I think will make education a lot cheaper and a lot more accessible in the future.

MB Historically or traditionally education has been a bit of a graveyard for investors. What has changed?

TN It is interesting because, for investors, we want to find good companies and good



investment opportunities at the same time, but it seems to be quite hard in education and, like you say, edtech is often considered a graveyard for investors. I think the reason for that is because it is really difficult to balance the missions that the education companies want to achieve, in the form of lowering cost and improving accessibility with the desire to be profitable.

MB Thaiha, let's come back to the idea of balancing profitability and mission a little bit later, but first I wanted to focus on some of the companies that you're invested in, which you're excited about.

TN Sure. We have three education companies in the portfolio, which are Coursera, Duolingo and FDM. I think the audience are all very familiar with Coursera. So, let's start with Coursera then.

Coursera has the largest library of MOOC, or massive open online courses, that I'm sure many of you have tried at least one before. Coursera fits really well with some of the changes that I talked about earlier. It has three business lines. The first one is called Coursera for Consumers, in which it provides short online courses for consumers like you and me, which I think will benefit from the desire for life-long learning to remain relevant in the ever-changing job market.

The second business is called Degrees, in which Coursera works with universities to help universities to provide online degrees for the students. That will benefit from the shift to online education which has become a must-have rather than just a nice-to-have for most of the universities.

The third business is the Enterprise business in which Coursera provides online courses for the employers and governments to help them upskill their workforce. What is so exciting about Coursera in my mind is the fact that its open platforms involve the major stakeholders in the education system, who are the educators, the learners and the institutions that employ them, and they work really well with all those parties.

It's sort of like a feedback loop because the more learners you have the better you can attract educators and employers and that works in a virtuous cycle. For Positive Change, Coursera is a Positive Change company because it has the potential to bring better accessibility to education, lower the cost and, at the same time, provide qualifications that are relevant for people who want to remain relevant in the job market.

MB What's the scale of the opportunity for Coursera?

TN The scale is massive. If you think about education, it is one of the biggest sectors. It's \$2tn market opportunity and the online degree market is estimated to be about \$40bn at the moment and rising to \$80bn by 2025. That is just some enormous number but I think what is really exciting for me is that the market opportunity can be very dynamic.

So, if you buy into the argument that we're going to live for longer, we're going to work for longer. We're not going to retire when we reach 65 years old. Maybe we



work until we're 80 years old. And we're going to keep learning, not just because we want to have new knowledge but also because we want to remain again relevant in the fast-changing job market. Then, there is the opportunity for education to keep growing, I think, is just quite exciting.

MB Tell me about Duolingo, which is a fascinating company, founded by Luis von Ahn, who is a really interesting character.

TN Yes, I remember having a conversation with Luis in the Duolingo IPO [Initial Public Offering] process and I was super impressed by him with all of his achievements. For some of you who may not know Luis, he was the inventor of CAPTCHA and reCAPTCHA, but I think more impressive for me is that he's a person who wanted to devote his entire life to education.

His background as an immigrant from Guatemala taught him the importance of education and equal access to education. So, interestingly, a story that he received an offer from Microsoft to come and work from them directly from Bill Gates, but he refused because he wanted to be a teacher in computer science, like a professor in computer science at Carnegie Mellon. And later on he founded Duolingo in the belief that he wants to provide the best education and make it universally available to everyone in the world.

MB Not many people turn down Bill Gates. I think that gives an insight into how he's quite mission-driven, as opposed to just profit-driven.

TN Yes. We come back to that point about balancing profitability and mission and I think Luis is a founder who always wanted to strike that balance right. It took Duolingo a while to figure out the best monetisation method. Because of the mission, he vowed not to ever charge for education content.

So, they came up with a subscription business in a similar way as Spotify in which, of course, you can learn language on Duolingo completely free but if you want to remove some of the advertising, and maybe learn a bit faster, then you subscribe for the premium service. I think that is a great business model that hopefully strikes that balance right between mission and profitability.

MB You've tried the app. How did you find it?

TN I'm a keen user. I'm learning Chinese at the moment and I have to be honest that Chinese is not the best language course on Duolingo. The flagship course is learning French and Spanish from English. Some of my team members tried it and I always received notification from Duolingo saying, 'oh, let's congrats that person because they've achieved X and Y and Z'.

So, it's quite amazing how Duolingo keeps finding ways to make the app more sociable and keep pushing each other to learn more and learn better because at the end of the day, for language, you just have to keep practicing every day and keep coming back to practicing it.

MB There's almost an element of gamification there, isn't there?



TN Yes. Duolingo is best known for its gamification approach because learning language is hard. It requires a lot of motivation. How to make you feel motivated to learn it every day. Duolingo thinks that by making it fun, making it like a game, kind of like a treasure hunt, you have to go step-by-step in order to get to something.

So, that gamification and making it fun, making each of the lessons really short but effective, I think is the key differentiation point of Duolingo, among a very crowded language app market out there.

MB I think you must be a lot more disciplined than me. They have green owl, don't they? Almost like a push notification that pops up and reminds you, now is the time to do your course.

TN Yes. And sometimes if you forget then the owl has kind of got angry and says, 'oh, that doesn't work. I'm going to stop sending the message to you'. I think Duolingo has a huge library of messages completely designed by AI to send those notifications to learners.

MB The other company you mentioned was FDM. What problem are they trying to solve?

TN FDM is a British company. It is involved in training, recruiting and placing people in companies that require IT expertise and they provide that service to graduates and ex-forces and returners to work. The problem that FDM is trying to solve is quite interesting.

We've heard a lot about the IT skills gaps and the conventional wisdom is that it is caused by the lack of IT graduates but it's actually not. The IT skill gap exists to some extent because of the unhelpfulness of university degrees, even degrees in computer science, in signalling the competencies in IT.

For that reason, when companies recruit for employees, the main things that they seek for is the previous work experience of IT in a professional environment, and that is exactly what FDM provides them with. In a way FDM helps solve the mismatch between the supply and the demand for IT expertise and, at the same time, providing job opportunities for a cohort of individuals who may not otherwise have access to that opportunity.

MB What I'm interested in is why you choose these companies in your portfolio as opposed to others and how you balance mission and profitability.

TN There are lots of reasons why we chose these companies but, ultimately, I think the point about balancing mission and profitability is the key. They have all found a business model that works really well with a system that can make sustainable revenues and profitability in the future.

It is really the management team that is committed to make that balance right. It is not always easy. Coursera and Duolingo, it took them years to figure out that monetisation method that they have now.



Duolingo, for example. Luis von Ahn always says that there's an easier way to make money. You can bombard free users with advertising to induce them to switch to subscription. That would earn you high revenues in the short term but that would just jeopardise user experience in the longer term. So, they're not going to do that.

An opposite example is Kroton, which is a Brazilian tertiary education company focusing on low-income students. And that is a company that Positive Change used to hold shares, but we sold later on the grounds that when things turned hard, in this case as the regulatory environment changed, the management team just pivoted its strategy and it no longer stayed true to the original mission. I definitely think that the management intent is a really important aspect of what we look for in those businesses.

MB What's your own experience here, Thaiha? You grew up in Vietnam. Has this shaped or informed your decision-making at all?

TN The experience in Vietnam is quite different from the ones that I think you have here. I studied in Vietnam until grade 11 before coming to the UK, and if I have to describe it, it was quite an intense one. Like typical Asian parents, they just have a lot of expectations for the kids. So, we were all sent to various different classes, private tutors, after school classes to study more.

In a way, the Vietnamese education system is very similar to the Chinese education system before the government crackdown, if you are familiar with China. I think that at that time I coped well but, of course, if I had to choose again then I would definitely prefer a less intensive one.

MB It sounds quite intense. You mentioned the crackdown in China on education there. Tell me a little bit more about your thoughts on that.

TN There are lots of different theories or even speculations on what is the ultimate Chinese government intention with the crackdown on education. One of the most popular theories is that the education, all the private tutors, after classes, exam prep courses, English courses have become a big financial burden for parents.

That has a direct impact on worsening the inequality problem for obvious reasons that wealthier parents can afford more and better education for their kids but it also has an impact on lowering the birth rate because education has become too expensive, that affording schooling fees for one kid is difficult, not mentioning two or three kids.

So, what the Chinese government wants to do with that crackdown is that they want to create a more equitable society and also to encourage the birth rate before the problems of China getting old before getting rich become worsened.

That is the most popular theory and, if that is the case, then I think it should be very welcome. However, I'm personally a bit sceptical on how effective that crackdown would be because if you think about it, the ultimate reason why the Chinese education existed in that way is because of their culture.



Parents just have lots of expectations on kids and they would try to do everything to push their kids to the top. One way or the other, they would find new ways to do that. And culture is very slow to change. So, I think it will be very interesting to see how the Chinese education systems develops in the future. I think, to some extent, Vietnamese education could follow a similar path.

MB That's interesting. Quite a lot of correlations there. Thanks so much for joining us.

TN Thanks, Malcolm.

MB Thanks for investing your time in this podcast. If you enjoyed this conversation about how education is being transformed, check out previous discussions we've had on the podcast about disruption, such as how the messenger RNA vaccine could provide a solution, not just for Covid but for cancer and other diseases, and also how the pandemic is changing the way we shop.

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