

Spring 2018

# Oral History Conversation with Stephen Foster


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## ORAL HISTORY CONVERSATIONS WITH CHANGEMAKERS

By Students in PHILOSOPHY 332: Business Ethics | Spring 2018

STEPHEN FOSTER  
(THOUGHTSTEM)

Conducted by Randall Hanshaw, Will Hays, Jennie Morgan, and Janaye Perry

00:01:07.460 --> 00:01:11.840

This is an oral history conversation on  
social enterprise between students in

00:01:11.850 --> 00:01:17.670

business ethics at the University of  
San Diego and Mr Stephen Foster C.E.O.

00:01:17.680 --> 00:01:23.010

And co-founder of ThoughtStem. Stephen,  
before we began the conversation proper

00:01:23.180 --> 00:01:28.380

and just by way of introduction to  
scholars who would be listening to the

00:01:28.380 --> 00:01:32.420

that to record a recording of this  
conversation could you give us

00:01:32.430 --> 00:01:37.510

a brief overview of what ThoughtStem  
does and the social impact you're trying to

00:01:37.520 --> 00:01:43.030

achieve? Yes So our mission is to  
teach computer science to kids.

00:01:44.920 --> 00:01:50.580

The reason why I'm passionate about doing that  
is that I think that computer science should be

00:01:50.580 --> 00:01:55.626

a basic literacy that everyone yourselves  
included I'd be happy to teach you to

00:01:56.860 --> 00:01:58.210

I sort of envision

00:01:58.220 --> 00:02:03.910

a world where computer science is  
taught alongside reading or math

00:02:04.500 --> 00:02:08.490

science or the basic things that you would  
want every child to know so I'd like to

00:02:08.500 --> 00:02:15.480

see it taught as quickly as possible or  
as early as possible in children's

00:02:15.490 --> 00:02:20.170

development since it's very difficult  
to get the school system to change in

00:02:20.180 --> 00:02:22.660

a large scale we instead founded

00:02:22.670 --> 00:02:28.600

a company try to teach computer  
science at scale.

00:02:28.720 --> 00:02:35.660

So can you take us back to what it was like? Were there specific  
experiences that you might be able to connect

00:02:35.670 --> 00:02:41.100

with the kind of work you're doing in ThoughtStem  
For example sources of

00:02:41.240 --> 00:02:46.970

inspiration or motivation. Seeds of specific ideas

Or important relationships?

00:02:48.620 --> 00:02:54.830

yes. So my mom taught me to code when I was very young.

00:02:55.380 --> 00:03:01.320

So that obviously helped. I was born in 1985, so I guess

00:03:01.320 --> 00:03:07.900

this would be the early 90's my family had moved to Saudi Arabia when I was three so I

00:03:07.930 --> 00:03:13.710

was living abroad and we had just gotten our first computer in Saudi Arabia like

00:03:13.830 --> 00:03:19.180

women can't drive so my mom stayed home like she wasn't working my dad worked and

00:03:19.190 --> 00:03:21.290

so she was it's like unfortunately

00:03:21.300 --> 00:03:26.290

a little bit like trapped in the house with us. Which worked out well for me it was

00:03:27.130 --> 00:03:32.140

just come up with lots of cool stuff. For myself and my siblings to do one of which

00:03:32.180 --> 00:03:35.740

randomly it was computer programming since we had just gotten our first computer

00:03:36.110 --> 00:03:42.060

and. I enjoyed I was like in kindergarten for me but so. Essentially I can't

00:03:42.070 --> 00:03:48.390  
remember not knowing how to code. And I  
know it's changed my life sort of knowing

00:03:48.400 --> 00:03:53.650  
that from an early age. It's sort of the  
reason I believe it's possible for people

00:03:53.660 --> 00:03:58.260  
to learn computer science early it's one  
of the reasons, One of the

00:03:58.510 --> 00:04:03.900  
things I draw inspiration from when you're  
figuring out how to do that so there is

00:04:03.910 --> 00:04:08.390  
that just knowing how to code early in  
life but also I think there's something

00:04:08.400 --> 00:04:09.070  
about living in

00:04:09.080 --> 00:04:15.920  
a different country that. And then coming  
back to America that sort of maybe makes

00:04:16.709 --> 00:04:21.360  
people more aware that things don't have  
to be the way that they are that they can

00:04:21.370 --> 00:04:22.940  
be completely different Saudi or is

00:04:22.950 --> 00:04:29.500  
a very very different place. And just  
the belief that change is possible well

00:04:29.880 --> 00:04:36.740  
that's great. So we moved

there when I was three

00:04:36.930 --> 00:04:42.650

and came back when I was twelve as I  
came back in to the sixth grade here in

00:04:42.670 --> 00:04:46.760

America. So you might of answered

00:04:46.770 --> 00:04:51.740

a few points from that last question that  
I might re-ask so feel free to skip over it

00:04:51.940 --> 00:04:57.440

What inspired you to pursue computer  
science you mention that your mother

00:04:57.610 --> 00:05:02.980

you know introduced it to you so can you take  
us back to when you actually decided to

00:05:02.990 --> 00:05:05.530

pursue your doctoral studies was there

00:05:05.540 --> 00:05:10.580

a particular problem question or vision  
that haunted you that made you feel it would be worth

00:05:10.590 --> 00:05:11.370

another half of

00:05:11.380 --> 00:05:18.250

a decade to be in academia.

I will admit that it

00:05:18.260 --> 00:05:22.010

wasn't thinking it through that clearly  
at the time I was I was just an undergrad

00:05:22.020 --> 00:05:27.580

and kind of just making decisions without  
you know your long term goal but

00:05:27.590 --> 00:05:30.140

I will say so I knew how to code  
from an early age but then

00:05:30.150 --> 00:05:32.080

a bad experience in high  
school with kind of

00:05:32.090 --> 00:05:35.520

a terrible computer science teacher made  
me decide I'm never going to code again I

00:05:35.530 --> 00:05:42.180

don't like it's not my thing and so I went to  
college in the University of Texas and. I

00:05:42.190 --> 00:05:44.230

don't remember what I was majoring  
in but I dropped out after

00:05:44.240 --> 00:05:48.660

a semester I was like I don't  
even like college. And I spent

00:05:48.880 --> 00:05:54.040

a couple years just like writing novels  
and teaching martial arts and living with

00:05:54.050 --> 00:05:58.350

my parents and honestly only went back to  
school because my little sister was about

00:05:58.360 --> 00:06:01.820

to go to college and I didn't like want to  
get her in like get ahead of me I'm not

00:06:01.830 --> 00:06:04.500

a very good reason but I'm just trying  
to try to be honest I would like to see.

00:06:05.600 --> 00:06:10.860

So I went back to school and I have  
majored in English. Computer Science wasn't on the

00:06:10.870 --> 00:06:17.400

radar switched to philosophy which is what  
I actually got my degree and I happened

00:06:17.550 --> 00:06:22.530

to just I think it was actually because I  
I didn't want to take math, Like I was afraid

00:06:22.540 --> 00:06:26.890

of math so I took computer science instead  
just to try to get rid of the math

00:06:26.900 --> 00:06:33.690

requirement. And luckily had an  
excellent professor in that class and so I

00:06:33.700 --> 00:06:38.240

took the next computer science class and  
the next alongside my philosophy classes

00:06:38.510 --> 00:06:43.280

and just lucked into the fact that  
double majored in both because I enjoyed

00:06:43.290 --> 00:06:48.020

computer science and so I had the option  
when I was graduating to go to graduate

00:06:48.030 --> 00:06:54.780

school in philosophy or computer  
science or neither i suppose was is also an

00:06:54.790 --> 00:07:00.510



option but I was dating somebody at the time I'm still dating who was going to

00:07:00.680 --> 00:07:05.530

grad school and so I kind of swayed me to want to do grad school so there was just

00:07:05.540 --> 00:07:10.400

a choice between philosophy and computer science and I chose relatively

00:07:10.410 --> 00:07:14.100

arbitrarily based on the fact that it's just

00:07:14.110 --> 00:07:18.010

a more sound long term decision to have a Ph D.

00:07:18.020 --> 00:07:20.250

In computer science than in philosophy.

00:07:20.580 --> 00:07:25.270

So do you think having a major in Philosophy change

00:07:25.270 --> 00:07:31.790

your thinking in wanting to change people's minds?

Yes, absolutely. I think it's

00:07:31.800 --> 00:07:35.780

something I recommend to people who are majoring in computer science they should

00:07:35.820 --> 00:07:39.130

also major in something else like something that makes them think critically

00:07:39.140 --> 00:07:42.250

about the world because otherwise you end

up with all these great skills but then

00:07:42.260 --> 00:07:47.890

not be like attitude for leveraging  
it to make change.

00:07:47.890 --> 00:07:54.310

Great so I'm curious and I really like your  
website and we've noticed you like to use

00:07:54.310 --> 00:08:01.500

the most effective techniques that challenge experts and also to introduce it to the world of computer  
science

00:08:01.510 --> 00:08:06.640

So I'm wondering if you would mind walking us through some of the stories or examples that illustrate  
how you

00:08:06.680 --> 00:08:12.020

explored those techniques and how you went about measuring the ones that are most effective?

00:08:12.020 --> 00:08:13.480

So that was a lot of my Ph D.

00:08:13.490 --> 00:08:19.950

Work I saw that research was  
on using video games and

00:08:20.440 --> 00:08:27.000

gameification to teach computer science.  
And so that that's something that

00:08:27.010 --> 00:08:33.460

we do at Boston, as well as try to basically  
the idea is to try to relate computer

00:08:33.470 --> 00:08:39.720

science to things that kids at that age  
care about which for many of them is video

00:08:39.730 --> 00:08:42.890

games and so that plays out in

00:08:42.900 --> 00:08:48.290

a variety of ways one of which is that we  
have to build their own video games just

00:08:48.300 --> 00:08:49.560

so that they're coding in

00:08:49.570 --> 00:08:55.640

a context that's that's meaningful for  
them. And then also in the classroom

00:08:55.650 --> 00:08:59.420

structure we try to gameify  
that experience with

00:08:59.430 --> 00:09:05.990

rather than have like tests or quizzes, we call them quests and as they go

00:09:06.000 --> 00:09:11.270

through quests and kind of achieve different  
things we give them like points in the

00:09:11.280 --> 00:09:15.020

form of physical printed dollars  
like they're not real dollars obviously

00:09:15.030 --> 00:09:18.760

they're like printed out look like  
sort of like Monopoly money I guess and

00:09:18.770 --> 00:09:19.680

they can redeem that's

00:09:19.690 --> 00:09:24.850

to buy like prizes at the end of class  
so it's just kind of make the learning

00:09:24.860 --> 00:09:29.070

experience into a game as well  
so learning experience is

00:09:29.080 --> 00:09:34.700

a game and they are physically building  
games that's their product.

00:09:34.710 --> 00:09:39.630

And so it also says on your website that you design these programs to do more than preparing

00:09:39.640 --> 00:09:42.090

The children for tomorrow's world

00:09:42.100 --> 00:09:46.320

They induce friendships, create lots of memories in child's imaginations. So you kind of explained a little bit of it,

00:09:46.320 --> 00:09:49.320

Im wondering if you could walk us through what a typical

00:09:49.320 --> 00:09:55.900

child's day might be like at ThoughtStem and how do they get to have these important life experiences

00:09:55.900 --> 00:09:58.870

as they're learning to code.

00:09:58.880 --> 00:10:05.480

So a typical day is, so we  
teach during the year not during

00:10:05.490 --> 00:10:10.130

the summer we teach in afterschool programs  
so their typical day would be they go

00:10:10.140 --> 00:10:15.180

to their normal school is they do English  
math reading whatever and they then when

00:10:15.190 --> 00:10:19.700

school is out they come to our afterschool program because their parents of previously

00:10:19.710 --> 00:10:23.890  
signed them up for that and then they do computer science for

00:10:23.900 --> 00:10:24.980  
another hour and

00:10:25.010 --> 00:10:31.870  
a half and then they go home but then. To sort of touch on the point of

00:10:31.880 --> 00:10:38.850  
like lasting friendships and relationships. So I believe

00:10:38.860 --> 00:10:44.920  
and it's backed up well by my research that learning occurs best when it's in

00:10:44.930 --> 00:10:51.390  
a social context when you know people example would be you know people in your class

00:10:51.400 --> 00:10:55.120  
you're friends with them you connect with the instructor.

00:10:58.590 --> 00:11:03.610  
Largely I think that people people don't choose to go into

00:11:03.620 --> 00:11:09.230  
a field because that field attracts them so much as they met someone who was

00:11:09.230 --> 00:11:13.410  
passionate about that field when they were

young and it was conveyed to them that

00:11:13.660 --> 00:11:16.090

that is something they might  
also enjoy. Do you feel

00:11:16.090 --> 00:11:19.670

a lot of the students that come  
to your courses you feel that

00:11:19.680 --> 00:11:23.790

a lot of parents force them in it and then  
they end up liking it or do you feel like the

00:11:23.880 --> 00:11:28.330

kids are sitting there feeling forced to  
get there and then they

00:11:28.350 --> 00:11:29.440

relax after

00:11:29.450 --> 00:11:33.530

a while and make friends?

You know it's both honestly we get both kinds of students

00:11:33.540 --> 00:11:37.080

we definitely have the kids who don't want to  
be there at all their parents but their

00:11:37.090 --> 00:11:41.430

parents do computer science or have heard  
that it's good and they make them do it

00:11:41.770 --> 00:11:44.330

those are the ones that are kind of the  
hardest to deal with because you have to

00:11:44.340 --> 00:11:48.520

convince them they want to be there, but we also  
get many of the other side who you know

00:11:48.530 --> 00:11:53.320

they're like I love videogames I want  
to make my own video games or I love

00:11:53.380 --> 00:11:58.670

Minecraft the popular video game probably  
heard of it or played it I want to use

00:11:58.680 --> 00:12:00.470

code to modify Minecraft it's

00:12:00.480 --> 00:12:05.720

a very popular thing kids want to do with  
coding and so that's one thing we provide

00:12:05.720 --> 00:12:11.010

To give them some advice, but it's across  
the spectrum.

Well the prizes help?

00:12:11.010 --> 00:12:12.950

The prizes do help for sure.

00:12:14.770 --> 00:12:24.580

So its not only Minecraft, that, are you only doing Minecraft? Or is there other video games as well?  
Yeah so Minecraft is the one video we have

00:12:24.580 --> 00:12:29.240

them like that use code to modify, but  
then you know that you know other classes

00:12:29.240 --> 00:12:35.390

they built their own video games and we  
honestly have other curricula as well like

00:12:36.270 --> 00:12:43.200

robotics for example and. Digital  
Arts. Things it's coding is the

00:12:43.200 --> 00:12:49.400

common theme, but in video games we try to  
have games, I said video games, really games

00:12:49.400 --> 00:12:56.380

in general is something we try  
to have the theme through whatever. Oh

00:12:57.400 --> 00:13:03.530

On a completely different note, women are underrepresented

00:13:03.540 --> 00:13:09.920

in the field of computer science, how is ThoughtStem  
working to reduce the gap between male

00:13:09.920 --> 00:13:12.370

and female voters? Yeah so it is

00:13:12.380 --> 00:13:18.060

a big problem in the field for sure and  
ThoughtStem can't change it all on our own but

00:13:18.110 --> 00:13:21.040

what we're trying to do is just hire

00:13:21.050 --> 00:13:27.320

a lot more women instructors so that  
kids who go through our courses see

00:13:27.340 --> 00:13:31.730

generally kids stick with our courses since they take it with multiple instructors

00:13:31.740 --> 00:13:36.250

and I want them to see like wow I had  
seven women instructors and three men

00:13:36.260 --> 00:13:38.060

instructors and I don't  
think it registers at



00:13:38.070 --> 00:13:40.720

a conscious level but I believe  
that they'll grow up with

00:13:40.730 --> 00:13:43.020

a perception that it's nice to say it's

00:13:43.030 --> 00:13:44.900

a young young woman I believe  
they'll grow up with

00:13:44.910 --> 00:13:47.910

a perception is something that they can do  
because they've seen the representation

00:13:47.920 --> 00:13:54.830

in their teachers. So, for the kids you

00:13:54.840 --> 00:13:59.370

have them do Minecraft and stuff. What  
from that kind of would help them take

00:13:59.380 --> 00:14:03.810

college courses where are you trying to  
light shape them so like the college

00:14:03.820 --> 00:14:08.350

courses that we have I T M G here and other  
computer science courses here what do you

00:14:08.360 --> 00:14:12.610

think that you're trying to give that  
that will most likely help them with that?

00:14:12.710 --> 00:14:16.310

Well, what was really pretty cool about  
computer science is that there's

00:14:16.320 --> 00:14:22.470

a relatively small set of core concepts

that are there whether you're coding

00:14:22.480 --> 00:14:27.770

a robot coding Minecraft coding a video  
game coding digital art or taking

00:14:27.780 --> 00:14:33.600

a computer science class in college and  
coding whatever they happen to have you do

00:14:33.610 --> 00:14:38.860

So, within our classes, that core set of  
of concepts gets reinforced and then they

00:14:38.870 --> 00:14:41.000

go to college they're  
not going to encounter

00:14:41.010 --> 00:14:45.020

a brand new concept is there really aren't  
that many in this sort of like you know

00:14:45.030 --> 00:14:49.910

introductory computer science concept bundle, so we teach the same ones

00:14:49.920 --> 00:14:53.550

same concepts that you would learn to intro to  
to computer science at the college level

00:14:53.840 --> 00:14:59.150

Oh so wow! You're teaching already to the kids? Hmm hmm. Usually about what age?

00:15:00.060 --> 00:15:04.990

So, our biggest age range, well we teach  
all the way from kindergarten up to

00:15:05.060 --> 00:15:11.970

through Senior High School but ours are.  
The largest population of students is in the

00:15:12.310 --> 00:15:18.170

Elementary school range. So are you kind of already teaching the college level

00:15:18.170 --> 00:15:22.000

ITMG stuff already to the elementary  
school kids? or is it more of

00:15:22.010 --> 00:15:28.810

a high school? No I would say that there's  
there are things we teach to elementary

00:15:28.820 --> 00:15:29.900

school students that

00:15:30.160 --> 00:15:34.640

a first year college student also learns  
for sure that there is definitely process

00:15:34.690 --> 00:15:39.310

did you integrate things that you  
personally wanted to know going in to your

00:15:39.310 --> 00:15:43.930

computer for doctoral studies and  
you'd wish you had learned during your

00:15:43.930 --> 00:15:48.230

classes of computer science that you're  
kind of integrating into teaching the

00:15:48.290 --> 00:15:55.080

children now? I wouldn't say going into  
my doctoral studies but definitely

00:15:55.090 --> 00:15:59.850

going into my undergrad studies there are  
things that I have learned or didn't

00:15:59.890 --> 00:16:06.020

learn that that I think people should learn

and so we try to teach those things but

00:16:06.030 --> 00:16:11.470

it's less about the concepts because as I mentioned those those stay relatively the

00:16:11.480 --> 00:16:15.310

same just because computer science is computer science no matter how you're

00:16:15.320 --> 00:16:20.950

teaching it right it's more that when I was an undergrad although I enjoyed my

00:16:20.960 --> 00:16:25.900

computer science classes leave disliked how like dry and boring you like lectures

00:16:25.910 --> 00:16:31.730

could be and so so the way that we teach is supposed to be highly engaging

00:16:32.440 --> 00:16:34.960

specifically because I have sat through many

00:16:35.800 --> 00:16:40.740

a not highly engaging class and in college and so I think one more question I

00:16:40.750 --> 00:16:45.260

really have for you is I was very surprised I'm so from Silicon Valley I've got I'm

00:16:45.300 --> 00:16:50.090

right next to Google and Apple I see all the coders all day yeah you could easily

00:16:50.100 --> 00:16:52.280

be up there making over \$300k.

00:16:52.680 --> 00:16:58.300

Do you feel more it's more meaningful  
in your life because you feel like you're

00:16:58.310 --> 00:17:03.010

more like engaged with the kids and stuff  
and you get more meaning out of that

00:17:03.020 --> 00:17:06.700

compared to being stuck behind  
a desk all day coding for

00:17:06.710 --> 00:17:12.790

a big company? Yes I'm definitely get  
more out of what I'm doing than

00:17:12.800 --> 00:17:16.920

than if I was a Code Monkey, I did  
right out of I skipped over this

00:17:17.010 --> 00:17:19.400

a moment ago but right out of  
college I spent a year just at

00:17:19.410 --> 00:17:25.310

a traditional. Coding job I made more money  
then right out of right out of college

00:17:25.319 --> 00:17:32.280

than now. But I hated that job yeah  
and I like this one. That's rad!

00:17:32.290 --> 00:17:36.680

I'm glad to hear you're a passionate person. Yeah  
and I also like I'm kind of lucky I just

00:17:36.690 --> 00:17:39.490

don't care about money that  
much and so I don't there's not

00:17:39.500 --> 00:17:41.210

a lot of stuff I want to buy

00:17:41.220 --> 00:17:45.650

I'm kind of a minimalist, I don't need to even be making what I make now

00:17:45.660 --> 00:17:50.510

it's you know I don't know what to do

with the money. Give it to your girlfriend! Yeah I know right? Haha

00:17:51.650 --> 00:17:57.370

She's also minimalist unfortunately, but something but yeah so it's like.

00:17:58.720 --> 00:18:02.300

You're right I could definitely go to Silicon Valley or even

00:18:02.310 --> 00:18:07.930

a company here in San Diego and make significantly more. But it would be more that

00:18:07.940 --> 00:18:11.570

I don't know what to do with and then I'd have to deal with the cost of like having

00:18:11.580 --> 00:18:16.790

a boss and not having as much creative freedom and not necessarily making an impact

00:18:16.800 --> 00:18:24.880

on the world and something that means something. I don't know almost anything about computer programming.

00:18:24.880 --> 00:18:25.930

But, it's like

00:18:25.860 --> 00:18:32.840

a language correct? Yes. So do you believe that, I know

with most languages it's easier to learn

00:18:33.130 --> 00:18:39.440

as a child than an adult. Do you feel like computer programming is the same way? Where people, almost

00:18:39.450 --> 00:18:44.250

kindergartners are picking it up just as fast, or if not faster, than the

00:18:44.260 --> 00:18:49.680

high schoolers you are teaching? You know that's that is an interesting question, it's

00:18:49.690 --> 00:18:54.800

a good hypothesis but I actually don't think that's true yeah I guess it is kind of

00:18:54.810 --> 00:19:00.720

like a language. The thing that, and they do pick up like young kids

00:19:00.730 --> 00:19:02.900

some parts of it really quickly but there's also

00:19:02.910 --> 00:19:07.610

a kind of mathematical sophistication that's required to not to get it in

00:19:07.650 --> 00:19:11.600

initially but like you need it eventually so that you can keep progressing.

00:19:11.640 --> 00:19:15.830

Also the attention span correct? Yes, that's true of this is the challenge is just keeping them looking at the

00:19:15.840 --> 00:19:22.610

computer running out or just playing video games and coding Yeah yeah. But

00:19:22.610 --> 00:19:29.410

Yeah so it's like, they'll pick up  
some stuff but, they also like need

00:19:29.420 --> 00:19:34.100

to like gain more like mathematical skills and  
mathematical sophistication and so they're

00:19:34.240 --> 00:19:36.030

they're sort of slowed down

00:19:36.040 --> 00:19:40.010

a little bit by that so as an  
adult if you like if you taken

00:19:40.360 --> 00:19:45.040

a reasonable amount of high school mathematics  
you can have that foundation that

00:19:45.290 --> 00:19:49.460

lets you switch to computer science more  
easily than someone who doesn't have

00:19:49.480 --> 00:19:54.860

a mathematical foundation. Also if your students are picking it up so fast, are they using it everyday?

00:19:54.860 --> 00:19:58.990

Are your students using it every single day? We try to incentivize that, but no not necessarily

00:19:59.000 --> 00:20:02.750

there are other definitely some kids who come to our class  
and they go home and play video games and

00:20:02.760 --> 00:20:05.860

then they come back next week and they  
learn something but not nearly as much as

00:20:05.870 --> 00:20:11.590

the ones who are like I love this, I'll do it at home! So to switch back to your



00:20:11.630 --> 00:20:16.940

creative/entrepreneurial side of your story. In one of our readings in our course, we learned about

00:20:16.950 --> 00:20:22.170

Frank Knight's theory of profit and how he distinguishes entrepreneurs from salary managers

00:20:22.340 --> 00:20:27.290

and whereas salary managers have the competence to manage business risk, while entrepreneurs

00:20:27.300 --> 00:20:32.110

are unique, in which they have both the confidence and the courage to deal with the uncertainty involved

00:20:32.150 --> 00:20:33.820

with executing an entire idea

00:20:33.860 --> 00:20:38.600

or creating a new market, so I was wondering if you can share a life experience where you had to deal with this

00:20:38.610 --> 00:20:39.880

this uncertainty

00:20:39.880 --> 00:20:45.250

Maybe, how you mustard the confidence and courage to deal with it especially entering this said field.

00:20:47.210 --> 00:20:52.500

It's a tough question. Well. OK I'll take

00:20:52.510 --> 00:20:56.220

a stab at answering and you can if I didn't quite answer it you can feel free to

00:20:56.240 --> 00:21:01.020

ask again but I think I'm somewhat lucky that I don't have like a

00:21:01.200 --> 00:21:05.620

a lot to lose, I don't have kids, I don't have

00:21:05.690 --> 00:21:07.890

a big house I don't own

00:21:07.900 --> 00:21:12.290

a lot of stuff and I don't have like an  
expensive lifestyle that I need to maintain

00:21:12.300 --> 00:21:17.640

so like at all times when I've been  
starting or thinking about starting where

00:21:17.650 --> 00:21:23.250

starting or running this business I'm always able to say to myself, doesn't

00:21:23.250 --> 00:21:28.300

matter if it fails I'll be fine I'm not  
going to lose my lifestyle won't change.

00:21:29.570 --> 00:21:34.920

You know that my kids will not  
starve, have kids to be starving so.

00:21:36.530 --> 00:21:41.420

I guess that sort of assists in having  
some amount of courage and risk seeking

00:21:41.740 --> 00:21:43.380

behavior I mean starting

00:21:43.390 --> 00:21:47.320

a business is risky in the sense that you  
don't know over the last forever but.

00:21:49.880 --> 00:21:56.110

Cool, and maybe can you describe maybe some challenges that you had starting up ThoughtStem,  
maybe maintaining it

00:21:56.110 --> 00:22:02.030

And mention how old the program is. So we founded it in 2013.

00:22:04.070 --> 00:22:06.290

And it's 2018 now, so

00:22:06.470 --> 00:22:13.460

a few years old. Some of the challenges  
that we faced in the I think starting

00:22:13.470 --> 00:22:17.830

Maybe, starting it, creating it, maybe some uncertainty. More the entrepreneurial side

00:22:20.760 --> 00:22:25.820

Yeah you know so we when  
we first started it.

00:22:27.930 --> 00:22:34.560

The vision wasn't what it is now we just  
started it as myself and two other grad

00:22:34.570 --> 00:22:36.000

students at U.C.S.D.

00:22:36.230 --> 00:22:42.220

And we. Should we just started going out  
to the beach and inviting other people

00:22:42.230 --> 00:22:47.010

and teaching them stuff like that we call  
it "free school and the beach" and it was

00:22:47.020 --> 00:22:52.370

fun but it kind of sort of dissolved because  
we couldn't get people to keep coming

00:22:52.710 --> 00:22:58.170

in like I like this idea of just free  
public education and kind of grassroots

00:22:58.670 --> 00:23:04.690

people teaching other people. But. But yeah  
it was hard to get people to come stay

00:23:04.700 --> 00:23:07.130

in the habit of coming so real  
like well what if we did it as

00:23:07.140 --> 00:23:10.840

a business for like two hundred people and  
they put some money down so that they at

00:23:10.850 --> 00:23:15.800

least how are invested and so we pivoted  
to running that sort tutoring company in

00:23:15.810 --> 00:23:19.710

computer science for kids.  
That was a U.C.S.D.

00:23:20.350 --> 00:23:24.460

And. And after reading that for

00:23:24.500 --> 00:23:29.990

a few months for like OK well let's hire  
someone to do the tutoring with us or for

00:23:30.000 --> 00:23:34.430

us that we can teach more people and so  
we did that hired our first employee and.

00:23:35.470 --> 00:23:37.500

At that point were like oh maybe  
we should like actually make

00:23:37.510 --> 00:23:41.490

a business out of it and like figure  
out what it means to start to see an

00:23:41.500 --> 00:23:45.990

incorporated something like that so I have  
some challenges just like getting over

00:23:46.000 --> 00:23:50.240

that paperwork hurdle of figuring out what  
you're even supposed to do programatic

00:23:50.250 --> 00:23:50.720

way to get

00:23:50.730 --> 00:23:56.970

a business officially started. It wasn't  
that bad though because we just grad

00:23:56.980 --> 00:24:00.700

students and not. All that we had no  
business experience were pretty good at

00:24:00.710 --> 00:24:06.160

reading directions and following that  
stuff. But then we started branching out we

00:24:06.170 --> 00:24:10.190

had a few more. Locations and it's

00:24:10.200 --> 00:24:13.970

a lot of challenges challenges for  
us always happened at a sort of like

00:24:13.980 --> 00:24:18.280

a growth threshold I've gone from zero  
employees to won and that was that was

00:24:18.290 --> 00:24:23.770

tricky going from WANT TO ten that was  
also tricky because now there's like

00:24:24.170 --> 00:24:30.340

significant like management involved and  
I mean we have probably fifty people you

00:24:30.350 --> 00:24:34.410

know on payroll and so going from

ten to fifty has been a challenge

00:24:34.740 --> 00:24:39.660

a lot of those challenges require us to  
build more. Like business software for us

00:24:39.670 --> 00:24:43.980

to help manage people because we can't  
afford to higher levels and levels of

00:24:43.990 --> 00:24:48.430

managers like it has to be sort  
of automated but luckily like I'm

00:24:48.440 --> 00:24:52.520

a coder and so in addition to running the  
company I also feel it's offer to run the

00:24:52.530 --> 00:24:53.430

company for me.

00:25:04.920 --> 00:25:11.750

So my uncle teaches a high school  
in Santa Barbara uses Minecraft is

00:25:11.800 --> 00:25:18.300

a way just students to do kind of  
research you know saw it is that the

00:25:18.310 --> 00:25:21.000

reason you chose Minecraft  
was because it was such

00:25:21.020 --> 00:25:27.490

a simple but for the you're able  
to get kindergarteners.

00:25:28.610 --> 00:25:33.890

I guess our our direct motivation was  
just the market appeared to want it like

00:25:33.900 --> 00:25:38.690

actually we started out just teaching I  
don't even remember what it is like it was

00:25:38.860 --> 00:25:43.240

started out teaching robotics and people  
would come in and we'd ask them Do you

00:25:43.250 --> 00:25:45.620

like what you're doing or you want to  
learn anything else and people just kept

00:25:45.630 --> 00:25:48.240

saying oh my craft I want  
to learn minecraft

00:25:48.250 --> 00:25:52.540

a rifle which probably figure out what is  
Minecraft and figure out what's Minecraft

00:25:52.550 --> 00:25:59.440

and how to code Minecraft some tools to  
help people my craft better so we didn't

00:25:59.450 --> 00:26:05.370

choose it specifically because it's  
appropriate like approachable for kids but

00:26:05.410 --> 00:26:10.100

because it's approachable for kids is why  
it's popular and we started providing it

00:26:10.110 --> 00:26:16.560

because it's popular it's three in the  
behind of hours and hours and yeah OK Same

00:26:16.570 --> 00:26:22.960

here I can't explain what  
you're having them code within the game

00:26:23.980 --> 00:26:30.330

Yeah yeah so we have been coding mods which  
is like an extension to the game for

00:26:30.340 --> 00:26:32.170

example the way my craft has

00:26:32.180 --> 00:26:37.070

a certain like set of creatures that are  
in the game like pigs and cows and sheep

00:26:37.080 --> 00:26:42.040

in rivers and endermen and through Mods you  
can add new ones that weren't there

00:26:42.300 --> 00:26:45.620

that the designers didn't put in  
you can put and so you just kind of

00:26:45.630 --> 00:26:52.510

customizing it for yourself and your  
friends.

00:26:52.730 --> 00:26:59.730

as well skills your teaching the kids.  
And I don't have any skills

00:26:59.740 --> 00:27:06.570

his kids go oh. Yeah so there's  
this kind of list of like well. What skills are you teaching

00:27:06.580 --> 00:27:13.270

accepted like introductory concepts  
it's Examples might be like. IF statements

00:27:13.280 --> 00:27:14.340

statements that's like

00:27:14.350 --> 00:27:19.930



a logical if like if this is true do this  
but it's not to this other thing. There

00:27:19.940 --> 00:27:24.910  
is loops where it's like run this bit of  
code but then loop back and run it again

00:27:24.920 --> 00:27:27.260  
and look back. And run again in  
the back and run again so that's

00:27:27.270 --> 00:27:33.460  
a common structure in any coding no  
matter what you're doing. Functions like

00:27:33.660 --> 00:27:39.270  
mathematical functions like this these two  
inputs come in and then this other input

00:27:39.310 --> 00:27:40.080  
comes out that's

00:27:40.090 --> 00:27:45.490  
a very core concepts in math but also  
absolutely of course concepts and coding as

00:27:45.500 --> 00:27:49.740  
well there's just three examples of like  
introductory concepts we teach it to the

00:27:49.750 --> 00:27:53.110  
kids and we teach it over and over and over  
to the kids it's not like something you

00:27:53.120 --> 00:27:56.230  
just teach once and they get it  
like you have to really it's like

00:27:56.240 --> 00:28:02.200  
a language where like let's just pretend

it's Spanish like I can teach you like you

00:28:02.210 --> 00:28:08.330

know ten Spanish words an immense grammar  
but one lesson is not enough like you

00:28:08.340 --> 00:28:12.320

have to not just know it like you have to  
internalize it or it's like repeating it

00:28:12.760 --> 00:28:16.760

over and the reason is you know if you give  
them verses Exactly exactly so there's

00:28:16.770 --> 00:28:20.740

a level of mastery we're trying to get  
people to and it's the repeated exposure to

00:28:20.810 --> 00:28:25.770

this or more concepts. Just want more of.

00:28:28.080 --> 00:28:32.600

You think. Your business idea is.

00:28:35.130 --> 00:28:38.460

Your Business. What are  
you a philosophy major.

00:28:41.830 --> 00:28:44.250

thats a good question

00:28:44.260 --> 00:28:48.700

a good question I don't know I haven't  
thought about that so my in my school was

00:28:49.430 --> 00:28:49.830

maybe

00:28:49.840 --> 00:28:54.490

a little unique there's sort of two kind

two major branches of philosophy there's

00:28:54.500 --> 00:28:58.390

the there's what's called analytical  
philosophy was which is by far the most like

00:28:58.760 --> 00:29:02.900

popular and most most most taught and most  
practiced form of philosophy and then

00:29:02.910 --> 00:29:06.880

there's that minority which is continental  
philosophy which is actually what I did

00:29:06.890 --> 00:29:12.230

in continental philosophy focuses on and  
different philosophers but also has

00:29:12.240 --> 00:29:18.130

a much stronger in emphasis on.  
Social change and social critique.

00:29:19.180 --> 00:29:25.100

It's where you would find like like  
feminist theory and clear theory and

00:29:26.080 --> 00:29:32.940

Marxist theory so picking  
one particular philosopher for is

00:29:32.950 --> 00:29:38.580

a little hard and so maybe about it but.  
Yeah just like you're being critical about

00:29:38.670 --> 00:29:44.150

that. In critical about the world but  
honestly not so critical that all you do is

00:29:44.160 --> 00:29:45.160

criticize

00:29:45.560 --> 00:29:49.240

a lot of philosopher friends who that's  
all they do is like find stuff wrong with

00:29:49.250 --> 00:29:54.690

everything and that's fine I think you  
should add on to that as on some actual

00:29:54.700 --> 00:29:59.150

action like change something that you're  
criticizing not them just going on hiring

00:29:59.150 --> 00:30:04.620

. Programmers for many years.

00:30:06.740 --> 00:30:07.940

I just guess you know you have

00:30:07.950 --> 00:30:12.620

a huge extensive background in computer  
science how do you think the future is

00:30:12.630 --> 00:30:17.910

going to kind of develop with computer  
science from what we have right now and are

00:30:17.950 --> 00:30:22.730

do you think that the shaping of these  
kids now they'll be have the innovators and

00:30:22.740 --> 00:30:28.990

of this new future I  
think so so what I'd love to see is

00:30:29.830 --> 00:30:31.370

everyone knows I would love to see

00:30:31.380 --> 00:30:35.550

a world where everyone knows computer science

and sort of if you think through what

00:30:35.560 --> 00:30:39.410

that means that means there's not  
necessarily going to be like

00:30:39.420 --> 00:30:44.300

a software industry you might not even  
have software engineering work coding as

00:30:44.310 --> 00:30:47.630

a job title anymore or just same  
way you like you don't have like

00:30:47.970 --> 00:30:52.050

a professional reader or writer as

00:30:52.060 --> 00:30:55.130

a job title because it's expected that  
everyone knows it and you're going to use it

00:30:55.140 --> 00:31:01.410

in any job so that's kind of the main thing  
I'd love to see that hopefully in my

00:31:01.420 --> 00:31:06.290

lifetime is some critical mass of  
people who understand basic coding as

00:31:06.300 --> 00:31:13.120

a literacy alongside reading math  
and writing science such that maybe

00:31:13.130 --> 00:31:13.590

there's not

00:31:13.600 --> 00:31:19.970

a coding industry anymore but but. Although  
there's not an industry for it there's

00:31:19.980 --> 00:31:24.370

much more code being produced much more  
tech innovation happening it's just

00:31:24.380 --> 00:31:30.690

organically across all fields. If you do  
the political side of trying to be have

00:31:30.700 --> 00:31:35.440

are you a advocate on the political side fighting for computer science in school

00:31:35.450 --> 00:31:39.800

a new computer program is  
like. From a young age

00:31:39.810 --> 00:31:46.670

a real class not to call it in our schools  
if you don't think I would love to

00:31:46.680 --> 00:31:51.750

see it no I haven't like sought out avenues  
to do that other than just advocating

00:31:51.760 --> 00:31:57.270

to people that it ought to happen but  
really you have to get there you know these

00:31:57.280 --> 00:32:03.700

are people talking and they're  
just not right. But I am

00:32:04.080 --> 00:32:08.750

said Tomorrow I'm going to the Computer  
Science Teachers Association here in San

00:32:08.760 --> 00:32:13.390

Diego is going to meet people who are  
teaching computer science or the passionate

00:32:13.400 --> 00:32:18.460

about it some of the people in school so  
yes I'm interested in mathematics as I

00:32:18.470 --> 00:32:19.180  
mentioned earlier is

00:32:19.190 --> 00:32:24.090  
a frustratingly slow to deal with the school  
system it just takes forever for them

00:32:24.100 --> 00:32:25.510  
to change it is

00:32:25.520 --> 00:32:28.400  
a big change you're right and then  
school system since I'm not adopt

00:32:28.410 --> 00:32:33.030  
a big change on lots of  
you from. And this was

00:32:33.040 --> 00:32:37.340  
a little bit off topic but I just wanted  
to hear your opinion with everything going

00:32:37.350 --> 00:32:40.930  
on in the trump administration he's kind  
of been very lax and I've been taking off

00:32:40.940 --> 00:32:45.450  
a lot of regulations one of them being  
like Internet regulations what in your

00:32:45.460 --> 00:32:49.810  
opinion how does that affect everyone  
because I personally used to have

00:32:49.820 --> 00:32:54.050  
a huge computer background and I don't quite  
understand what was happening if I was

00:32:54.060 --> 00:32:58.750

hoping maybe you did and if you don't  
know words yeah that's it's hard to know.

00:33:00.370 --> 00:33:07.180

Both sides of that issue have their life  
story of what bad thing might happen. So

00:33:07.220 --> 00:33:11.120

what bad thing might happen to us if it has  
not happened and they're all might not

00:33:11.310 --> 00:33:17.810

but it might be the case that now you  
know. It's harder like maybe one of our

00:33:17.820 --> 00:33:23.000

competitors starts paying more money and  
so our customers are able to access their

00:33:23.010 --> 00:33:27.980

website faster than our website and so we  
would have to pay more money so that just

00:33:27.990 --> 00:33:28.280

is not

00:33:28.290 --> 00:33:33.860

a money war right now it's not that way that's  
just the way what people that's I'm just

00:33:33.870 --> 00:33:37.880

giving that as an example what can bad  
thing people say might happen but I will

00:33:37.890 --> 00:33:41.980

also say that hasn't happened I don't I  
personally don't believe that it will come



00:33:42.130 --> 00:33:46.850

so so you don't think he's really done  
anything to affect the like Internet world

00:33:46.910 --> 00:33:52.930

terribly not yet as it very well  
could be wrong about that I am

00:33:52.940 --> 00:33:58.100

a supporter of net neutrality and wish  
that that wasn't deregulated but I'm also

00:33:58.110 --> 00:34:01.280

not of like I'm doing prior and in the  
sense that I think that it's going to

00:34:01.290 --> 00:34:06.810

immediately cause things to you know blow  
up it hasn't for us but I again time will

00:34:06.820 --> 00:34:09.179

tell I don't know yet this is

00:34:09.190 --> 00:34:15.500

im curious to be honest

00:34:16.120 --> 00:34:21.739

so to take it back to minecraft

00:34:23.710 --> 00:34:28.800

So if we can take it back to Minecraft. So you might be facing one potential issue because of the market  
might not even support

00:34:28.840 --> 00:34:35.429

the software the Microsoft might offer. So if thats the case then you might have to go to the console

00:34:35.440 --> 00:34:41.159

that gets away from computers, so are  
you taking any steps to deal with this

00:34:41.170 --> 00:34:46.179  
situation. Some Yeah I'll back up

00:34:46.190 --> 00:34:50.340  
a little bit in that we. We started  
teaching Minecraft like just

00:34:50.380 --> 00:34:57.170  
a few months maybe four months before  
Minecraft was acquired by Microsoft and we

00:34:57.370 --> 00:34:57.810  
were

00:34:57.890 --> 00:35:02.880  
a little worried then because we had just  
started developing software arounds modding

00:35:02.890 --> 00:35:07.790  
Minecraft one of our products is learned  
to mod which is online environment from

00:35:07.800 --> 00:35:11.240  
ADI Minecraft and so we weren't sure if they were going to shut it down, I don't know.

00:35:12.580 --> 00:35:17.700  
And generally speaking they just haven't  
cared honestly they haven't shut us or

00:35:17.740 --> 00:35:21.440  
anyone else down. Because we had

00:35:21.450 --> 00:35:27.260  
a lot of people that like to MOD

00:35:28.540 --> 00:35:31.420  
Yeah definitely and I mean my kids have  
come to our class and they don't have

00:35:31.430 --> 00:35:36.000

Minecraft they have to go buy Minecraft. Have you contacted Minecraft for a possible collaboration?  
Yeah actually we have

00:35:36.010 --> 00:35:40.410  
a sort of loose partnership or early on  
with with with Microsoft in which we are

00:35:40.420 --> 00:35:44.940  
helping to teach with Minecraft and  
it was a lot of fun, we got to meet

00:35:44.950 --> 00:35:49.780  
a lot of the key players in Microsoft who  
are dealing with Minecraft that we do

00:35:50.040 --> 00:35:53.830  
kind of know them like we have occasionally  
shot them an email, saying " can we even do this,

00:35:53.840 --> 00:35:59.560  
is it OK?" They've always been friendly about it so so I'm not

00:35:59.570 --> 00:36:04.330  
worried but there is in terms of taking  
steps just just in case yes there is

00:36:04.340 --> 00:36:10.640  
a there's an open source version version  
of an open source like Im Clone let's say

00:36:10.650 --> 00:36:17.400  
a clone of my Minecraft called mine test which  
is honestly very similar looking in

00:36:17.410 --> 00:36:22.580  
terms of gameplay and and so if it became  
the case that they said you cannot

00:36:22.590 --> 00:36:27.430  
use Minecraft in an educational setting we

would just pivot it to use Mine test and

00:36:27.520 --> 00:36:32.060

the kids would be just as happy honestly  
we piloted it with kids and kids like it

00:36:32.070 --> 00:36:37.670

just so much and it's become something it's  
more. So well what would become of the

00:36:37.670 --> 00:36:44.410

. Children's interests in Minecraft if it  
actually declined? Yeah. That's

00:36:44.420 --> 00:36:46.650

interesting I mean it is... I mean we have seen

00:36:46.660 --> 00:36:51.270

a small decline honestly and so we just  
fill in with whatever the market does want

00:36:51.280 --> 00:36:56.070

like some do continually try to get marketing  
feedback and see what it is that kids are

00:36:56.080 --> 00:37:02.800

excited about learning and try to  
teach that. You know. Minecraft

00:37:02.810 --> 00:37:09.810

is one mode-able game, there are others  
roadblocks for example. I just

00:37:09.820 --> 00:37:13.910

found out the other day about Fortnite  
apparently it's was very popular at the

00:37:14.820 --> 00:37:21.350

time so Fortnite coding maybe maybe we'll start  
teaching. Maybe children shouldnt use Fornite yet. Maybe you're right

00:37:21.830 --> 00:37:26.960

I haven't played it yet but that's good  
to know. Yes OK I mean games is the theme

00:37:26.970 --> 00:37:33.720

so maybe it doesn't have to be Minecraft, it's whatever  
games kids want to learn more than.

00:37:33.900 --> 00:37:35.000

I have a question about your market with children.

00:37:35.010 --> 00:37:42.000

I was wondering where your inspiration came from? I'm wondering if it was maybe from your mother  
teaching you from such a young age, or....

00:37:42.010 --> 00:37:47.050

So, I am curious about why children?

00:37:52.940 --> 00:37:57.730

I think we didn't like, well clearly think it all through. You know

00:37:57.740 --> 00:38:01.950

it came down to us wanting to start computer  
science education company, and then we asked whether we should we teach

00:38:01.960 --> 00:38:06.930

kids or should we teach adults because  
we just started out tutoring kids and we were like well

00:38:06.940 --> 00:38:10.320

who wants to be tutored? And we realized that kids  
want to be tutored, so we will tutor kids and so

00:38:10.330 --> 00:38:15.090

it was a tutoring business to start with and  
so then we just kind of maintained that

00:38:15.100 --> 00:38:22.060

focus on teaching teaching young people.

Until actually like early two thousand and

00:38:22.070 --> 00:38:29.040

seventeen we started. Kind of  
offering the free coding boot camp

00:38:29.050 --> 00:38:33.990

for adults I don't know if you are  
familiar with coding camps but there are

00:38:34.100 --> 00:38:40.800

generally six to ten to twelve week programs  
that are like intensive coding

00:38:40.810 --> 00:38:44.670

education boot camps for adults and they're  
designed to help people switch careers

00:38:44.710 --> 00:38:46.080

since computer science such

00:38:46.090 --> 00:38:50.940

a hot career maybe even if you majored in  
philosophy for example and your ready to get

00:38:50.950 --> 00:38:52.320

out and I can't get a job as

00:38:52.330 --> 00:38:55.790

a philosopher. Well, what else can I do? Well in  
twelve weeks like that maybe you have

00:38:55.800 --> 00:39:00.250

a job as a programmer so these do exist but they carry like

00:39:00.260 --> 00:39:05.590

a pretty hefty price tag and it's can be  
up to you over ten thousand dollars for

00:39:05.600 --> 00:39:06.370

example if you got

00:39:06.380 --> 00:39:13.020

that to shell out . So we decided to try to just  
teach that for free since and in

00:39:13.030 --> 00:39:19.420

exchange they would teach kids in our  
classes as well. And that sort of morphed

00:39:19.430 --> 00:39:23.790

into what is now our general employee training program so anyone who

00:39:23.800 --> 00:39:28.590

wants to. So it's actually better than free because  
now if you want to learn how to code we

00:39:28.600 --> 00:39:33.920

will pay you to teach kids in the train you  
over the course of many many weeks and

00:39:33.930 --> 00:39:34.430

your gain

00:39:34.480 --> 00:39:41.340

a lot of those skills as well.  
So. With. Computer programming

00:39:41.350 --> 00:39:48.240

not being super popular How do you market  
ThoughStem to get parents to get parents involved so that they

00:39:48.250 --> 00:39:53.350

want their kids to get a background in coding? You know we're

00:39:53.360 --> 00:39:54.980

a little lucky in that there's there's

00:39:54.990 --> 00:40:01.850

a big nationwide push to have people learn

to code so even

00:40:01.860 --> 00:40:05.290

though it's not like taught in  
schools there are organizations that are

00:40:05.300 --> 00:40:10.510

lobbying for it saying it needs to be, code.org  
for example is one of the top kind of

00:40:11.400 --> 00:40:16.750

advocating organizations for cutting  
education and so. Parents know about it like

00:40:16.760 --> 00:40:19.690

Well most don't have to convince people  
that coding is the future because they've

00:40:19.700 --> 00:40:25.090

heard of enough from other people. We're  
lucky in that regard. And really we have a big

00:40:25.100 --> 00:40:30.090

enough existing customer base in that we don't have to sell to people why coding is

00:40:30.100 --> 00:40:36.780

important. So are there other competitors  
doing kind of the same thing are you guys

00:40:36.830 --> 00:40:43.370

are doing?. No no I mean definitely  
their competitors. Okay so what

00:40:43.600 --> 00:40:50.270

differentiates your company from theirs?  
It's hard to

00:40:50.280 --> 00:40:54.070

know for sure like I have definitely  
research competitors but it's hard



00:40:54.080 --> 00:40:57.510

to understand the inside of their  
organization, like know exactly what's going on

00:40:57.690 --> 00:41:02.230

but from the product side, I think that our classes are more fun sort of more tightly run.

00:41:02.240 --> 00:41:07.730

So do you use a game type of strategy? Not that I know of, plus there no

00:41:07.740 --> 00:41:10.690

reason that they couldn't. So you know it's

00:41:10.700 --> 00:41:14.900

a secret Yeah but I think that my philosophy  
is don't you shouldn't just have one

00:41:14.910 --> 00:41:18.260

secret so there's not just like one  
secret sauce we have like we have

00:41:18.270 --> 00:41:21.660

a lot of little things that add up to what I think is really strong program

00:41:21.670 --> 00:41:26.710

Okay, so there is no secret sauce to ThoughtStem then?

00:41:26.720 --> 00:41:31.530

No not really, I mean i feel like we have a really good employee training program, like train people really  
well and so

00:41:31.930 --> 00:41:35.440

when the kids get into class they connect  
with their teacher and their teacher seems knowledgeable

00:41:35.450 --> 00:41:39.250

so they're also immersed in  
this like kind of game five curriculum and

00:41:39.260 --> 00:41:40.230

they're also coding

00:41:40.240 --> 00:41:44.800

a game that they are excited about just  
some examples so they all kind of come

00:41:44.810 --> 00:41:51.180

together to make something that I believe  
like cohesive and I would like to say

00:41:51.190 --> 00:41:57.940

better than our competitors but.  
Well OK so maybe for the final question

00:41:58.080 --> 00:42:01.330

so Since you mentioned earlier that you aren't money driven

00:42:01.340 --> 00:42:08.090

do you feel that that influence your business, and what I would call a Social Business?

00:42:08.100 --> 00:42:13.350

so I'm curious that not being money driven really helps

00:42:13.350 --> 00:42:18.350

you being socially driven? So I am wondering what that process not being

00:42:18.360 --> 00:42:25.250

a for-profit business looks like? Yeah  
I mean I guess so, because

00:42:25.290 --> 00:42:31.160

if I were personally motivated by  
getting rich I'm sure I would run it in

00:42:31.170 --> 00:42:35.080

a different way make decisions like any time I've been given

00:42:35.090 --> 00:42:38.610

a decision of like such should

I make more money or have

00:42:38.620 --> 00:42:43.930

a greater impact I'm sure I would pick  
the make more money option and that over

00:42:43.940 --> 00:42:45.080

time would have created

00:42:45.090 --> 00:42:49.220

a very different business but instead would  
make the other decision you generally

00:42:49.430 --> 00:42:54.190

definitely try to make sure that we're  
making money and staying sustainable but but

00:42:54.870 --> 00:42:58.040

given the choice generally  
we take what's going to have

00:42:58.050 --> 00:43:04.280

a bigger impact what will reach more people.  
You know but it's hard to know what

00:43:04.290 --> 00:43:08.560

the alternative universe where if I was  
money driven what the company looks like I

00:43:08.570 --> 00:43:13.340

don't know and I'm sure it would be  
different. Do you think being in Saudi Arabia

00:43:13.490 --> 00:43:14.780

kind of impacted you a lot like that money driven things

00:43:14.790 --> 00:43:19.660

because I know that there is just so much ridiculous money there so kind

00:43:19.670 --> 00:43:21.060

of maybe you've overwhelmed you as

00:43:21.070 --> 00:43:25.330

a child maybe I don't know I'm just picking  
up things because I'm very interested.

00:43:25.340 --> 00:43:31.460

That is an interesting hypothesis I'm not  
sure. I mean my parents are not super

00:43:31.500 --> 00:43:33.310

rich so I don't.. I mean you're right there's

00:43:33.320 --> 00:43:39.810

a lot of money in Saudi Arabia but I don't  
think I internalize that at that age. And

00:43:39.820 --> 00:43:44.390

say you know maybe I don't know you are  
you know I don't know or you know

00:43:44.400 --> 00:43:45.550

sometimes it's hard to like tell

00:43:45.560 --> 00:43:50.210

a story about why how you ended up the  
way you are and I can make guesses it's

00:43:50.220 --> 00:43:56.890

a good guess, haha i dont know. Great, well are there any other questions?

00:43:57.640 --> 00:43:58.780

nope, we are good to go. Great, well thank you so much then.

— End of Transcription —