Rick Berwick

Lowell High School class of 2008

CCSF Class of 2010

UC Berkeley Haas Class of 2012

Co-founder, Twindom.com (3D printing figurines)

*Tell me about your high school years and what prompted you to come to CCSF?*

My original plan coming out of HS was actually to go work for Google. I had a one year internship that I was supposed to be doing that was part of something called the LEAD program. I had done a lot of community service in high school, so I applied and I got in. I was told as of sometime in December that I got into a one year program, which would have been a gap year. I would have applied to college during that time and gone back after that. To be fair, I hadn’t completely weighed all of my options, so I knew that an internship with Google would be an amazing experience, so I kind of took it and ran. Then in April, after I got rejection letters from the two schools that I applied to as kind of my ideal backups – Harvard and UC Berkeley – I got those rejection letters and then two weeks later received an email saying, “sorry, the Google intern program has been cancelled.” So, I immediately threw my arms up in the air and realized that I had to figure out what I was going to do with my life. I looked around and tried to figure out what are my options. I had already visited CCSF and understood the community college system – visiting Canada as well – I knew the program was going to be very much different than a four year program if I were to come in and do two years and transfer out – or even come in and do two years and get back into another internship or something like that – and then go on to work – given the options, I looked at it and knew that CCSF was going to be a great place with amazing professors. There were a lot more resources and a lot more opportunities than there would have been anywhere else and with any other options. That’s how I ended up choosing CCSF for two years. It was a very complicated decision but I am really, really glad that I did.

*You arrive at CCSF. Where did you begin and how did you learn about the many resources available? Did you see a counselor?*

So, my first day I believe on campus is when I did visit to go see a new student counselor before the semester started. That session did absolutely nothing (zero) for me. I came in, met the counselors, sat in the office and waited for 25 minutes. The counselor directed me to the requirements, which I had already read fully and directed me to assist.org – and told me that if I was interested in getting into a four-year school that I should look at this. It was very redundant. The way that I formulated my plan was what I thought would make the most sense and what was available at the time in the class schedule. I looked at past years class sizes and schedules and I had an idea of how many seats were going to be around for each class, and what I could do to get into those. It was truly a self-guided experience because the essentially, most of the resources when I first came in were not terribly helpful which was disappointing. I ended up helping three or four people from my classes figure out their plan because they essentially had the same experience that I did. They did not know how to reach out and find the information on assist.org and stuff like that.

*What was your perception of City College before you arrived?*

Actually, my perception of City before I arrived… it was definitely positive and it was definitely… I looked at the institution as a place where people from all over the map and sorts of different places would come to learn and figure out what they wanted to do.

*What was your experience like building community and finding your place at City College?*

 Building community and finding my place was at first a big of a challenge. Definitely limited resources and definitely hard to find the right people at the right time. I joined a bunch of different organizations, and to be fair, Alpha Beta Gamma, ABG was by far the organization that I really got into the most while on campus. That said, I really loved the community feel my first day. It felt like a community and it felt like everyone that was there was working toward the same purpose, but it was the smaller groups that really helped form the community for me.

How did you find the clubs and how did you find your community and how did you even figure out where to go to find like-minded people such as yourself?

That’s a hard one. Where did I go to find like-minded people like me before the clubs. I knew that there would be people at CCSF from all walks of life. I knew there would be people who were working and people who were just in school, there’d be people in school and working at the same time, people who had kids and people who didn’t. The way that I planned it out was in my classes the first semester, I registered for 21 units the first time and I met people in those classes. Even though I wasn’t going to get to keep all of those classes, I pretty much used that to expand my network and to meet people. Because the first day or two in each of those classes was very social. In many cases, the professor would hand us the syllabus, talk about something and say, “now meet everyone else.” So, I used the first day to meet a whole bunch of people. That was definitely a really good experience but in terms of structured events, I would go in the cafeteria and sit down at a table and literally strike up a conversation with someone. I had no idea what I was in for and I had no idea what these people were doing. Trying to find a way to strike up conversations was at the top of my list and to be fair, the classes that I took that were not anything related to my major were the best sources of those conversations – taking a class on electronics and soldering essentially came from all over.

What was your goal while at CCSF in terms of transferring and how did you learn about the transfer process?

My goal when I came into City was definitely to transfer to Cal. It’s funny. I actually… so a number of people said that I should have applied to a number of private schools out of CCSF, and I think I would have been considered a serious candidate and maybe could have gotten in. But I didn’t want to pay that kind of tuition and moving away – so going across the bridge wasn’t so bad and I knew that I also wanted to go to Cal from when I arrived – and I also wanted to prove them wrong because they had rejected me the first time around.

That said, I guess the resources that I looked for transfer – one of the first things that I found was the cross-registration program. That program was invaluable because it put me on campus the first semester, so I got to take essentially a calculus class on campus and that semester I actually had the class at Cal, a writing class at Canada because I couldn’t get a writing class at CCSF because it was full and I had to fulfill the writing requirement, and a class at CCSF – two days a week, I was driving 96 miles roundtrip, but it was worth every second of it because getting into Cal and understanding where I wanted to go – it really made a big difference.

So, I loved the resources that I had in the transfer center. It was so helpful. Great people, great resources and the help writing essays was limited because they didn’t have the resources and getting help with that stuff was hard. But to be fair, I had a lot of resources outside of school that I could rely on for getting help with that sort of thing and I really didn’t have much trouble with it, but once again, but I did end up helping the people that I know who did apply to transfer and I did read a lot of essays and peer review. The requirements are made very clear with assist.org and the websites and the applicable schools that we wanted to apply to, but in terms of the softer side, it was less well-defined.

*What were your extracurricular activities at CCSF and why do you think you were accepted to Berkeley?*

I was a part of ABG and ABG was fantastic. I will admit that having that on my list probably contributed. Being in a business-based club or society, it was something where I’m sure that looked quite good. I also participated in the director’s advisory council for Haas as well while I was at Haas, but before that, because I was in ABG, they sort of looked at me as a candidate because I held a role at ABG. I was part technical because I managed the ABG website as well and did a few other things. Other things I did for fun at CCSF – I spent some time in an electronics lab as a once a week thing paired with a class the first semester and then he said just to come back in whenever we wanted. I did beginning acting and joined an impromptu improv group for a bit. I don’t know what benefit that had, but it was fun, nonetheless. I ended up taking improve again at Cal which was a ton of fun.

*Tell me how the professors at City College compared to the professors at Cal in terms of curriculum and engagement.*

You know, the professors at City from the perspective of coming out of high school, one of my first experiences at City is that the professor clearly states that they are here as a resource, number 1 and I am here to impart knowledge, number 2 and I am going to do my damn best to make sure that everyone who wants to succeed will succeed. Of all the professors I had at CCSF, I would say the quality of the essentially the programs and the quality of the instruction probably an 8 or 9 out of 10 for the majority of my classes. There were a select few classes that left a little something to be desired – mainly because the retention rate was 30% or 25%, and for any professor who has that kind of retention rate (many times due to things out of his/her control), it has to be insanely difficult to keep things going. It was really, really valuable to me that the professors gave me the opportunity to do work at the level I was capable of and to not necessarily hold me down. They let me do projects beyond their limit. The limit was whatever I wanted it to be. I took five or six honors classes. I vaguely remember that the honors projects were really, really good because they were the best part of the semester and something I got to do on my own time and shaped by things beyond the class.

*Was CCSF challenging?*

I took 17 or 18 units every semester – I got out in two years – no summers – you know, I am not going to say that it was easy. There were definitely classes that were quite difficult, on a scale of 1-10, it was probably a 3 or a 4. It wasn’t a 2 and it wasn’t over a 5. I was able to continue running my business during the semester while taking 17-18 units while doing other things – I had a different experience at Cal. During my first semester, I took 14 units my first semester and 17 units every semester thereafter. At Cal, with a 17-unit load, depending on the classes I was taking, I was out of my apartment doing classes I was taking or school-related things from 7 AM to 7 PM. My weekends I reserved for going home and spending time with Ariel (laughs). [Ariel is Rick’s now-wife]

*What was your fondest memory of City College?*

That’s a hard one. There were a lot of moments. Um. You know, the moment that I remember the best is kind of random. But, I believe it was in one of the temporary buildings at the bottom of campus and I believe it was Dennis Mullen’s class. We were essentially waiting for him and we heard there was something going on the Bay Bridge. Someone had called him and he called back. He said he was going to be 35 minutes late and I don’t know whether this should go anywhere, but he said that the blank exams were in the desk and someone can pass them out and you guys can start. And I thought to myself, “you’ve got to be kidding me. We are going to take an exam without the professor in the room.” So, I can’t remember who it was who had called and had heard that and they came in and said it very casually that the exams were in the desk and we can start – so we all sit down and we all start taking the exam. What’s ridiculous is that we took the exam for 20 more minutes before he showed up and everyone was quiet and taking their own test and nobody was doing anything weird – and this is not what I expected but it was really awesome and the people who were in that class really loved the material and really loved the class. Now, mind you that it was more than half of the students had already dropped the class. He called that day saying he was going to be five minutes late and ended up being more than half an hour late. He could never get to class on time.

*Lowell, CCSF, Haas – how did CCSF impact you and your life and career?*

City College gave me an understanding of what the real world was. I went to Lowell, and at Lowell, we were in a little bubble. We were very much separated from reality is and how the working world actually works. CCSF was two years of not necessarily like.. I don’t want to say real life experience out in the field, but real life experiences being discussed in the classroom. Cal was very different – Cal was very much theory. Almost every class was theory. At Haas, I got a good taste of experiential learning, so I did get to go out into the field and try things, but to be fair, when I was at City, the experiences that I had and the people that I got to talk to – I got to ask more questions at CCSF to people who were in my classes – they were peers and like-minded individuals – and I got to hear stories of everything. Left and right, you name it – I got to hear about it. There were people in my classes who got to do virtually every profession – people in sales and everything at least – people who had worked retail, customer service jobs, so I got an experience hearing from people who did all sorts of stuff and that was invaluable to me because I ran my own business all the way through from the time I stated at CCSF to the time that I left. And I had experienced, but I had never seen what I classified as the real world. I had never stepped outside my comfort zone and tried to do something outside of that, but CCSF gave me that experience and it gave me a ton of people who had that experience all at once. It was kind of scary at first, but definitely really really valuable. In terms of how that shaped what I was able to do coming out of school. At Cal, I continued running my business, but at a much lower level. I probably halved my revenue of what I did the first two years at CCSF, but when I left Cal, I knew based on what I had seen and based upon all of the experiences that I had had and everyone that I had talked to, I knew that I wanted to start my own business going into Cal and coming out of Cal, I was super interested in doing something entrepreneurial joining up with one or two of my peers with whom I could work. A lot of what I learned at CCSF from all of those other people – that’s what directed me in that direction. I knew I didn’t want to work in banking, I knew I didn’t want to work in consulting, I knew I didn’t want to work in accounting, and to be fair, most of that is from talking to people that I met at CCSF. So going into Haas, I expected to do entrepreneurship. It was a very different experience at Haas than I had originally intended. Haas did not provide nearly the amount of resources for entrepreneurship that I had expected – it is very accounting, banking and consulting focused – but I got to be one of the not 93% of the students at Haas who go into ABC and got to be interested in entrepreneurship as an undergrad. So, I spent a lot of time with MBAs, which was good.

One of the Twindom partners went to Haas and the other is an Industrial Engineering major.

*Tell me about Twindom.*

Twindom is three years old. We started Twindom in September of 2013. I have been working with David since I was in school at Haas. I met David Pastewka in my first week of school – an entrepreneurship seminar where they were talking about things – we went through our first year bouncing ideas off each other and he would come to me with a really long list and I would shoot them all down. He had taken a class called mobile application development and he had taken a class called mobile application development and that was with Ken Singer and he said it was a great class and there was a spot and I thought this could be a great class, so I joined. Even though David had already taken it, he came back and joined our team. In that class, we ended up with a team of 6, and out of that team of 6, we built an app for clearance items where you could scan a barcode for an item, it would pull product data and we would post it to eBay, so you could scan and sell products from a local store by just scanning and tapping a button. We actually sold things on the live marketplace. Well, actually the things we sold were through our own channel. We didn’t sell through eBay directly. We posted tweets with a link to the product and our own bargain carousel on black Friday. We built the app and after that class, we knew that we wanted to continue working together – the four of us did. There were two with other paths. One went to work for Facebook and the other seriously wanted to work for Goldman Sachs – he wanted to be a banker, no questions asked, so he petered off. So, the remaining four thought that we would investigate and see what we could do. So one of the four of us had an uncle who was seriously interested in LED lighting and he talked to us and made it sound extremely appealing – this was my spring semester, so it would have been January of 2012. His uncle pitched us on doing LED lighting sales and distribution and we knew it would be a replacement for incandescent. We kind of got in bed with the wrong guy and we jumped into a business with an advisor who ended up incorporating the firm without telling us, we were kind of written out of cap table and it just didn’t end well. As soon as we realized that, it was an ex-McKenzie and an ex-Harvard guy. He had a great background and was a family friend but he did not manage himself well, nor did he manage the relationship well. After we built a product, he told us that he was just working with us because it was the best thing to do at the time. We walked away after about 7 months. Effectively, we talked to five different legal councils and a bunch of different lawyers because we had built effectively the starting of a project. The company wasn’t worth anything at the time and there was a bank account with $2,000 – all of the assets were things that I had lent to the company (all of the hardware). We knew it was toast, and decided to put this under our belt and do something different. We moved into an office in the Dogpatch on August 1st. We moved in and we were there for four weeks and we moved out. We called up the guy and told him that we noticed you did this that it was bullshit, and we walked away.

After four months, we moved into Skydeck here at Cal. The guy who ran the mobile app development class at Cal got us into Skydeck without an idea and without anything. It is kind of like a Y Combinator, but nowhere near as structured. We did try for Y Combinator. Within three weeks, we decided on a 3D printing vending machine – and that it would be ridiculously valuable to society because everyone wanted to use a 3D printer but they didn’t have access to it. We wanted to do 3D printing and someone said they like vending machines – so we did that. In November of 2012, we applied to Y Combinator and we did a demo and Paul Graham said it was the most engaging demo he had ever seen and that he didn’t believe in the product. It was a good thing we didn’t get in because that product would not have gone anywhere and we ended up not giving away that much of the company. We ended up working with Boost (Tim Draper’s son), who had been trying to contact us for five months. We just kind of ignored him for a while and then responded to him. He reached out to us. We got a ton of press in January and February of that year. Partly because we took our system to the NYSE with our 3D printing prototype – the Economist did a piece on us and we had the best free advertising anyone could ask for.

We had 120 people reach out to us in two weeks to ask how they could buy a Dreambox. IT took us a few months and one was at the Children’s Creativity museum. WE had a second machine at the Asian Art museum printing miniatures of those sculptures and statues. In August, we decided to go back and test 3D scanning again. WE could get usable scans out of a 3D camera, a hand poled turntable and hold the camera and move up and down. With proof of concept, we sold $3,000 of figurines within 72 hours. I had seen MakerBots every year for three years at CES and I was enthralled by it. A machine that is programmable that makes things is even better. We couldn’t find the ideal product/ killer app for what the machine would produce. No one could think of what they wanted from the vending machine, but with these (points to the figurines), the technology at the time wasn’t the best. Over time, it has gotten to be amazing and that is because the scanners that we used were low res and now the prints look fantastic and one of the other things that we had to get over is that every part of this business is difficult from making the scanner and choosing the right scanner to the scanning process to tracking data and tracking order and to using the data for something meaningful to cleaning up the data into something printable to printing to distribution to shipping. Every part was complicated and we took a ridiculous complicated set of things that need to be done and we created a streamlined process for it – we idd most of it with automation and software and the pieces that weren’t automated and software related, we continued to make easier by making the hardware better. So, you know, today it’s an amalgamation of 20 different steps along the way and we’ve made it so that you can read a 30-page document, understand the whole process and give us $20,000 to start your own business.

We are licensing the software the selling the hardware. Our target market at this moment is anybody who is at a point in their lives of business career where they’re ready for a new source of revenue. A lot of people come to us because they think the technology is amazing. It’s a fun product. The people who buy scanners from us come from all walks of life. We have two investment bankers who bought systems and set them up because they wanted to do something fun. We get people who want to use them for virtual reality and scanning of avatars and we get people who want to use them for clothing and fitting and animation in general. There are tons of different application and what we’ve found is that everyone comes to us with a different idea and what they want to do – and everyone wants the printed product. But our goal is to make it easy to do all of those other things – clothing fitting, virtual reality animation and applications – a lot of special events but not so much weddings – people want weddings to be perfect. This is not a perfect product! We get a lot of people who buy scanners and they expect more than what the printers, which have been the same for 16 years, They sold to 3D systems in 2011, so HP’s printer is the first one that is going to rival these guys in terms of quality but it’s another years and a half until we see the full color quality – that will be a speed increase and not necessarily a quality issue.

We are now a team of 11. The largest we were was 17 with 7 outside the office and 10 in the office. Our most recent is that we had 9 people and then we had a slowdown in orders because it just wasn’t that time of year, so we are back to 7. Because the printed product today – we continue to fulfill the product for our customers – the hardware is not a one-time purchase. The hardware is a one-time fee for covering the cost. We make the money back on the software subscription. When you buy a scanner, the data that the scanner produces is a set of 178 photographs and what we provide in the cloud is a service is 178 photographs that creates that 3D model. We do the fulfillment through a network of partners that we’ve had that we have created. We don’t do any of the printing here – 93% is done off site. We only see international orders here. That was probably one of the hardest parts – figuring out fulfillment. Quality sucks in this industry and nobody can get it right. You have upset partners, customers and you have prints that come in and they look like (inaudible) – the printers are inconsistent and for that reason, quality and consistency are key. The first year and nine months, we never shipped a print to a partner to print. Now we have the three largest print houses in the world.

As it stands today, we are…. Poised to continue selling full body scanners and continue building this base of products that people can sell through their platforms and we will continue to release quality improvements on the scanners and we have a lot of things to continue developing those end cases and the level of investment that we would have to make is above and beyond our resources today. We need to define what the next revision of our end product is great. Crystals, plastic prints and animation, but with our next revision of the product, we want to solve a problem and change the way that people make decisions. We like virtual fittings and we have started to prototype that we have the ability to take a scan of you and put clothing on a robotic mannequin – we would likely start and we love low hanging fruit and we need to prove the product in some way. We will start with men’s t-shirts and button ups, but we are definitely going to move towards… every time we can offer a new product, we refuse to have people use our system that is outside of what we intended – people and their pets. We have to turn down a lot of customers and for a purpose that we weren’t interested in, but they don’t want to do the subscription and we want to do our own processing.

*Is this where you envisioned yourself and where do you see yourself in a couple more years?*

I knew that I was going to be doing something that I loved. Because I wasn’t going to give that up. It wasn’t going to be a question on that one. In terms of my day to day, if I look back four years ago and say what did I want to do, I wanted to start a small business consulting firm. I did small business consulting at City and taking a company selling PBX systems to businesses and they wanted to optimize. I always wanted to do small business consulting after doing tech consulting and computer repair – and I saw so many ways people could make their businesses more efficient. What’s hilarious is that at the time I was getting out of school, I chose what I was doing with the team because I wanted to do something on my own. Guess what I get to do every single day? I get to do small business consulting every single day for my own business and for every single one of our partners who buys a scanner – I get to work with them and tell them how to optimize their business because I know how to optimize their business because I’ve been in that business before. We did it ourselves for the first year and now I get to provide them with the tools necessary to make their businesses thrive and as much as I get upset when customers don’t do what they’re supposed to do, and what I love is that I get to optimize for that. It makes more sense for them to read documentation than not to read it. Four years ago I would have said that I will hopefully be running my own business and doing small business consulting, and low and behold that’s what I am doing—I got to continue doing that. I got to do exactly what I wanted to do and I was pretty sure what I wanted to do at the time. With the LED lighting, it would have been helping people optimize their lighting and working with small businesses to make their operations more efficient.

*Tell me about the pride that you feel as a product of the community college system*

I am extraordinarily proud to come from a college that gave me the opportunity to do anything that I could possibly have wanted to do, and it was probably one of the most supportive communities to be in – also one of the most educated communities to be in to make those decisions. It was outstanding to interact with people from all walks of life and also to have the resources and the professors and the programs that we had to be able to identify the areas in which I wanted to grow. That is probably the most valuable thing and what I am most proud of – having gotten out of the community college system.

*What could we do better at City College of San Francisco?*

To be fair, the only part of my CCSF experience that I felt was just terrible and not supported, no help at all, and didn’t point me in the right direction was the new student counseling. It was the first experience I had at CCSF. I walked into an office where there were 12 people working and I did not feel welcome at all in that office. I had conversations with people in that office that made me feel like they were not giving me the right information – they were actually giving me the wrong information, so really I mean apart from those first few experiences dealing with the counseling department, after that, it was phenomenal, and it was great. If CCSF could do one thing better, it would be to have student volunteers who do student counseling and that would be the way to go because really – these people had no idea of what we wanted to do, what our backgrounds were and they didn’t have the ability – I am not going to say it was them individually or the people in the department and the structure of how it works fed them 400-500 students each at the start of semester and there is no way you can possibly know what those students want to do. So, if you even had an idea of what category you wanted your education to land in – math, science, writing, art or technology – find someone in the field at school who knows the system and let them help out. Mentors.

What’s really hard is that everyone that I talk to – I know a number of people who work at CCSF and graduated a few years before me – everyone says if only the school could spend more on classes and less on administration – that might actually make a difference and there’s a massive community of people who would love to help out with counseling and I admit that it would be a ridiculous amount of work. At Cal, they had as a two-year transfer, they had one day where you showed up on campus and before you registered for your classes and before the semester started where they had counselors from the department available for you to talk to – and that was valuable because it let us get answers about specific class-related questions. That’s expensive because you have people who are there during the summer who were answering these questions. I am sure that’s not something they took lightly because it was a very large expensive for them – but more so, they had Haas students there to answer questions. Other than that, honestly, everything else was great. I wish the food was a little better other than the main cafeteria, but that’s okay.