Transcript for Podcast with Dr. Mathew Saponaro

Attendees

Christina Smith, Matthew Saponaro

Transcript

Christina Smith 00:21:.So Welcome to the digital chalk talk podcast. We are delighted to have Matthew Sapaniro join us today. Dr. Aanero is an educator who teaches both at the University of Delaware and has been bringing programs to the Christina school district.he He also was the founder of the AI Whoo school teaching students from kindergarten through 12th grade in um youth coding and…

Christina Smith: other parts. If you want to elaborate on that a little bit, what exactly was the basis behind

Matthew Saponaro 00:51: So I mean we start the basis is that there's technologies been changing.

Matthew Saponaro: um Unfortunately the curriculum that's been being taught isn't like keeping up with the tech trends and so we wanted to create something that aligned with what was coming out with all the old technology. I used to run before the AI whoo school we used to do the AI whoo which we basically developed deep technology to do various things. One which was we worked in parks and trails, we worked in with sports,

Matthew Saponaro: we worked in clinical and we would take image into some videos and create our own algorithms to process those videos. so from a video, did you know that I could tell you, how many calories you were burning, And

Christina Smith 01:53: That's very interesting. Mhm.

Matthew Saponaro:01:54 I can probably te tell you the age, gender, how fast you're going in that video, and a whole bunch of things that you probably wouldn't even realize it that that's being addressable. but that's the reality of, AI and all that. a lot of there's connotation about, tragedy and things, but that's only the tip of the iceberg about what can actually be done. once we start looking at what bigger data sets are available, we're able to look in those other types of patterns that wouldn't be necessarily available otherwise.

Christina Smith: Right. Okay.

Matthew Saponaro: So I took all that technology and I was like how can we teach the next generation how to do this right because even the tech that we were developing at the time it's very cutting edge so how can we bring it to the next generation that's where we first started off as and I think we first started off with actually teaching over at Newark High school.

Christina Smith: 02:58 Right. Okay.

Matthew Saponaro: 02:59 one of we had an AIdriven coding course. and students were making websites and they were making video games,…

Matthew Saponaro: web applications. we had one student who, wrote a program that would go to the Five Guys website and order them a cheeseburger, right? because they could,…

Christina Smith: right? Because they could Nice.

Matthew Saponaro: Because they could. But how do they do that and it's based on there's just new stuff that's new tools that are available right and so getting them introduced to that was really phenomenal. and it started at the high school level and then just slowly over time we've been creeping down all the way into the prek level. and so after the high school that's how we started with Shu Middle School…

Christina Smith: All right.

Matthew Saponaro: because we had the AI course and then we integrated that into teaching Chinese culture. so I have a Chinese background. we primarily use Chinese in our house to speak,…

Christina Smith: All right.

Matthew Saponaro: but I thought, hey, there's a novel way with using some of the new, commercially available tech that's out out there to learn about Chinese culture. and so today, this week is the mid-autumn festival.

Christina Smith: Yes. Okay. Yeah.

Matthew Saponaro: And during the class for this week students used chachi to create a dramatic play. one of which our groups had an inspiration from Kung Fu Panda and there was lots of fake fightings and Master Uguay telling about how we should have balance and Master Shiffu saying, "Hey, we all have a role in life and we need to eat moon cakes.

Christina Smith: You're talking about chat, TV, GPT, and all that.

Christina Smith: I know you use more than that from reading the article. So, what other AI and technology have you brought into the classrooms?

Matthew Saponaro: So in the same class the students were generating backgrounds generating images deepai there's a little website that will generate images and…

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Matthew Saponaro: so then we generate images for different scenes that were playing out and…

Matthew Saponaro: have that going in the background of a Canva presentation. and then they use suno.com to generate some music and it can be instrumental, it can be vocal. and so they had a kung fu fight scenes with instruments so they had the,…

Christina Smith: Nice. Yeah,…

Matthew Saponaro:

Matthew Saponaro:

Matthew Saponaro: Anything? and then drums and all that good stuff. So, it was really cool.

Christina Smith: that's a Yeah.

Christina Smith: So I know like you were saying you started with the older children and now you've been working with that, but I know you do work for the university, but now that you've kind of taken it down and you're working through that K through 12, what is your actual teaching philosophy like that is your background for that?

Matthew Saponaro: My goodness. there's three components. Whatever they do needs to be engaging and they also need to have fun. and wait no last I think I repeated myself. So technical have fun slashengaging and then the third part is that they need to rationalize about it. think about what they're about to do before they actually go ahead and do that. and I think that really whatever they do as long as it has those three main core components they're going to be developing problem solving those other types of skills that it's going to be useful in other fields not just in computer science.

Christina Smith: And so then you talked about I know but can you explain what program it was that you actually brought to SHU in the classroom and…

Christina Smith: the collaboration that you had with the teachers there to bring that class there?

Matthew Saponaro: So it's the Chinese immersion so they have a Chinese immersion program.

Matthew Saponaro: Basically this specific course is learning Chinese culture through technology. so every single course has some type of tech has some parts of cultural component but also has a technical component to it. And so they'll learn about different foods. They'll learn about different regions in China that has different foods. They'll learn about different places of interest, Chinese mythologies, the different schools of thought.

Matthew Saponaro: Right. those will be the cultural components confusionism, dowoism, all that good stuff. And then they'll have technical components where they'll have to utilize chatbt Google lens where to do some type of task right and so one of those tasks for example they would have to go to the great wall of China. So for most Americans, they think of, if they were to go to China, where would they go to? probably Beijing, Shanghai, Hong Kong, some places like that. and so where,…

Christina Smith: Okay then.

Matthew Saponaro: what do you do there? if you go to Beijing, you're going to go to Great Wall of China. How do we get the students prepared to go to the Great Wall of China? Let's go create an itinerary plan of the Great Wall. So work with ChatBD to create one. Then they have to go to Google Earth, figure out different locations and places of interest within the Great Wall. where's the ticket center? What are different places of interest? They have to map it out. and then they'll have to present about those different topics. but while they're mapping out and actually exploring the Great Wall on Google Earth, what they'll notice is that a lot of it's in Chinese. Okay. So what does this monument say?

Matthew Saponaro: So, what they can do is go to their Chrome browser. And if you go to your Chrome browser right now, and you click on where the address bar is thing, there's this little camera icon with a plus and the dot in the middle and that's Google Lens. And basically what that is is that you can highlight text and it'll immediately translate what that text is. And so even so like that that's as a foreigner going into that to some place…

Matthew Saponaro: if you having something on your phone that can just be directly me immediately translate whatever you're seeing. Boom. Let's practice the skills that you're going to be using in order to order your dumplings at when you get done from the Great Wall.

Christina Smith: Right. Right.

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Christina Smith: So now you're saying that they go on their Chromebooks and all that. Is there any type of extra monitoring that you're putting in to make sure that they're using the technology that you've kind of really started introducing to them appropriately and within I know the Christina school district may have some different rules on what can be and all that and…

Matthew Saponaro: …

Christina Smith: I'm sure it may have been a challenge in

Matthew Saponaro: yes, I mean some students, while they're on their Chromebooks,…

Matthew Saponaro: they'll go on YouTube or search inappropriate things and then it's But the point is that How do they do that? So the prevention is the best case, right? So Christina will just block certain websites.

Christina Smith: Where? Okay.

Matthew Saponaro: So how do you prevent them from going onto YouTube? when we have Chromebooks allowed during Until we get to our technology portion, we go over our technology portion. Then the best part is that they have to work in groups and they have to share a computer amongst all of them.

Christina Smith: Okay.

Matthew Saponaro: So if you go on YouTube, you're going to have two people that are going to be really annoyed with you because they're assignments not going to get done. So we get that social support mechanism in order to actually get them to line interests.

Matthew Saponaro: And…

Christina Smith: Good.

Matthew Saponaro: then if that doesn't work and they still go on the YouTube which happens during that technology portion it's more like an interactive lab section. so they have a task and then the teacher will just walk through and be like Can I help What can I help? And it's just so much exposure that they have to deliver. And the other thing is that typically the task that they do they will have to present on it at the end of class.

Christina Smith: So, yeah, that's kind of leading into I was going to ask you I know last year was the first year that you really brought this one to Shu Medel and I was going to ask you how did you kind of assess what the students may have learned from that?

Christina Smith: And what you would maybe change and what you adapted,…

Matthew Saponaro: every so even…

Matthew Saponaro: though that we have the cultural we have the technology maybe the last part I don't mention is the presentation component there's always a presentation component the students will have to share their work and…

Christina Smith: right? Hello. Yes.

Matthew Saponaro: I mean even though this is a technology ology class. Realistically, I try to aim for developing their soft skills. because when AI is able to go ahead and do tasks that we would usually do, for right now, if we do a lot of coding and now it's like you go to chat speed and just comes boom, here's your program. what's the value of learning it? you have the communication abilities,…

Matthew Saponaro: So you can ask the right questions. You can be comfortable with talking with The human aspects it absolutely is.

Christina Smith: Did you have to introduce some of those things to the teachers when you were working with them?

Christina Smith: Because how familiar were they with the technology and then was it a learning process for them with the technology?

Matthew Saponaro: So I've been there when we do the course typically they did have a learning curve with it but the teachers have been able to pick up on it and it's primarily through just during what happens is in a given week we'll meet two or three times and so I will go ahead one of those days showcase how to do it and the teacher is kind of like listening what's Matt typing in what are keep doing and then repeating the steps and then they're able to do that during the following days in order to do that.

Matthew Saponaro: I have on some occasions …

Matthew Saponaro: where I needed to create some quick Loom video and just be like okay you click here type this thing done. that was for Google Earth because that was a little bit interesting because you can get some pretty interesting things out of Google Earth. we try to have some type of deliverable too.

Christina Smith: Yeah, absolutely.

Christina Smith: So, I know it kind of jumped back a little bit, but were you able to create feedback and all that with those projects and be able to present them to the parents and stuff too so that they could see what they learned from it and you that being able to understand what they were seeing and what their child then learned.

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Matthew Saponaro: So I took videos last class.

Christina Smith: All right.

Matthew Saponaro: Hopefully the parents can see something. I don't know whether the actual videos or some interpretation of it but we always have okay so we did a music album and we posted so during class the students made their own music about street food and…

Matthew Saponaro: so during that they have a deliverable where they have to create a song so I aggregated all the songs put them into a music album and then we took the music album we put into the shoe store and…

Christina Smith: Go ahead.

Matthew Saponaro: so parents could listen to it and we shared out links to it and be like, "Okay, here's different things and so they can see and then we put the names of students of who wrote what and then all their lyrics and everything." So it was lots of tracking So to be honest,…

Christina Smith: That was good, measurable and all that. so no, like you were saying, you were taking videos and stuff like that, but of course we know technology does not always go our way yet. So, are there what do you troubleshoot when you're trying to use certain things and it maybe is not working the way that you need it to?

Matthew Saponaro: I would go to chat and be like, "Hey, keyboard." so I've had situations, right, because sometimes I give the students my own devices just…

Matthew Saponaro: because I need them to utilize some software that's on it. and so they'll use my computers and then they're like, "My mouse doesn't work. I can't use the mouse." I'm like, "How does the mouse turn off?" I have no idea.

Christina Smith: What the Right.

Matthew Saponaro: This is not my specialty. so then what I'll do is I'll go on my phone. And I'll be like, "Okay, chat GBT Linux or Lenovo blah blah blah HP blah blah blah touchpad not working and they'll be certainly try pressing these buttons and okay hey it works." so that's been very helpful. just going onto my own phone and just checking things

Christina Smith: And checking it. so that kind of leads into there.

Christina Smith: What kind of advice would you give to other educators that are maybe trying to introduce different AI and…

Christina Smith: technology but are maybe a little cautious because of those types of problems because there could be issues that come up and they're not comfortable fixing them. Right.

Matthew Saponaro: I would just try it before and…

Matthew Saponaro: what works and just do a little bit at a time. I mean when we did this course I mean honestly there are new technologies that we do try. but it's always just bit by bit and I would, even create multiple backup options like that. You can never go wrong with reverting back to, pen and paper. And at the end of the day,

Matthew Saponaro: the AI computer literacy is nice, but what is the real thing that people are trying to learn, And the technology that we have today is going to be much different than the technology 15 years ago or 15 years in the future, which is also different from 15 years ago.

Christina Smith: Okay. Right.

Christina Smith: Yeah. Yeah. and that kind of leads into also so given that educators have a pretty good workload, from doing that class and from working in higher education. students outcomes and ethical concerns what are some practical strategies that you would think for implementing in higher education and…

Christina Smith: or in kindergarten through 12 since you're working with both?

Matthew Saponaro: I mean I am of the embracing of the tech side.

Matthew Saponaro: I mean so what workload is a little bit different but what I think should be taught perspective it's more becoming on how can we leverage it effectively. So in computer science, because we had this debate the other day about whether the intro course should be intro to programming or intro to computer science. And the argument was that they do a lot of programming and I said hey that may be your version of the course but in my version of the course we do lots of intro to computer science topics.

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Matthew Saponaro: And so we do some programming but it's really reinforcing the different areas you have machine learning you have data science you have computer vision you have robotics you have natural language processing like all these different core components the funny thing is that after you get to the 300 level in computer science basically junior and…

Christina Smith: Okay.

Matthew Saponaro: senior you're not really programming at all right and so I try to bring down those topics from the 3 400 levels into the intro 108 course. And how do you do that? It's with all First of all, the key is more about being able to read and interpret results, right? Identify where are things what are the making good judgment calls of should I use this or…

Christina Smith: Right. Right.

Matthew Saponaro: should I not use this right thinking about more from a system level perspective of there's some magical black box that may not make sense and sometimes it doesn't give the right results but it's sometimes useful how do I use this black Right.

Christina Smith: And it's funny that you started talking more university level too from what I asked. what role do you actually feel that technology already plays at the university and then where would you like to see it maybe headed more since you're saying technology is forever changing right now and we're definitely in an era of technology changing. So

Matthew Saponaro: So when I look at what we have and…

Christina Smith: What the f***?

Matthew Saponaro: it's a little bit different than what's over what I've seen outside the US, I mean, there's robots cleaning hotels.

Christina Smith: Yes. That

Matthew Saponaro: There's robot fighting leagues. That's a thing. there's also drone deliveries of your bubble tea, so there's more about individualized learning and novel visual tools that have been developed using some of that tech to really give that individualized learning for the students. so one of the examples is this interactive geometry different squares, pentagons, things like that and you click on it and…

Christina Smith: Mhm. Right.

Matthew Saponaro: you can change the size but also it's like you can rotate it around. You can open it up to look at the different spaces and that can help to explain surface area, area, derive some of the formulas and just visually overlaying it and you can do it like you can see it on the screen but you can also project onto it from a phone or something like that. It's really crazy. so I'd like to see more leverage of that to reduce some of the more mundane tasks.

Christina Smith: Okay. Gotcha.

Matthew Saponaro: Yeah. So at least in computer science any type of project there's some boilerplate code we copy and…

Christina Smith: Specifically which

Matthew Saponaro:

Matthew Saponaro: Why copy and paste it?

Matthew Saponaro: just have it already done for me kind of thing, Focus on things that are more innovative.

Christina Smith: Okay, that's it.

Christina Smith: All right.

Matthew Saponaro: That's my thinking. and then we can use the fundamentals that we learn on the math and apply it to these newer type of problems. And I guess I'm very, persuaded by going after, those robot fighting leagues and drone deliveries. And to be honest,…

Christina Smith: All right. Yeah.

Matthew Saponaro: that is just an application when you start looking at the fundamentals. I mean, what is a drone delivery? I mean you can do from a path planning perspective you can do it from the geometry perspective you can do look over there's so much math you can go into the physics into it there's probably some science into it I don't know but it's just problems are huge just pick something that is technical that can rationalize about it and…

Christina Smith: Right. Yeah.

Matthew Saponaro: also that's engaging and interesting so whatever that is I don't I mean,

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Christina Smith: No, I understand that. so I mean you do have such a broad spectrum of is it hard to, go back and forth between what you're trying to do with the much younger children because there's just

different levels of knowledge of that technology and how much you should or maybe shouldn't use or what parts and

Matthew Saponaro: That's a really weird thing…

Christina Smith: Mhm. Right.

Matthew Saponaro: because I've done some really bad things and you may say it's bad but some people may say it's bad but I also think it's kind of cool. I have given a group of kindergarteners the same problems as high school kids and college students just to see how they would do. And I've given some kindergarteners, and this is the funny thing, some problems and they were able to solve it while the college students struggled. right.

Matthew Saponaro: It's really like there are things that the younger group isn't able to do but at the same time it's just like whatever can allow for them to go after those core problem solving components great let's do it and…

Matthew Saponaro: to have some type of ownership in what they do.

Christina Smith: …

Matthew Saponaro: So yeah.

Christina Smith: where I know we've talked before I know you want to expand a little bit more through the Christina school district and doing more in the schools. Now you are back at SHU for right this year.

Matthew Saponaro: So we have a few different programs and…

Christina Smith: And it's the same class. Are you trying to do more? I believe you told me you were trying to go to the high school back to the high school for maybe something else.

Christina Smith:

Matthew Saponaro: I think it's just more about reach and making the right connections to establish them. I think that if you look at what we're delivering to Shu it is pretty rigorous. even this summer we did a game design course with and that was on par with the college level difficult so I mean it's all good in terms of just learning things. would I change what we did from last year? slightly. Yeah. And I think that there's still a lot for me to even explore on.

Matthew Saponaro: just even the tools from last year to this year right the AI video generators have become much more sophisticated and…

Matthew Saponaro: I think that could be a good tool to dive into some be like okay I want to think about this Chinese mythology that doesn't even exist and it's really hard to think about and visualize it but given that these are the personalities and the relationships. Let's create something, visually that can explain the story much better than…

Christina Smith: All right.

Christina Smith: and right. Okay.

Matthew Saponaro: then using something text based like chatbt

Christina Smith: So, we were touching base a little bit, but you're then going between, middle school to high school and college. when you're in mind of that, do you have anything that you change a little bit because of just the ethics of working with the slightly different age variances?

Christina Smith: How do you monitor sometimes that a little bit more of that, leeway in using technology, right?

Matthew Saponaro: I think it's also about just monitoring…

Matthew Saponaro: how they're progressing and the level of frustration. I may push them to their upper limits. but it helps. but yeah, I mean I just measure how are they able to solve the problem? Are they able to solve in some capacity? and…

Christina Smith: Rank.

Matthew Saponaro: then I try to back off when appropriate, during that summer with the shoe I may have pushed them a little bit too hard on their game design. like that that's a little bit rough, but at the same time they were very excited about it because they're making their own video games. So they had that fun component to it. So they're able to even though that that technical and makes their brain hurt type of thing,…

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Matthew Saponaro: they are having fun. And so once that flips, okay, nope, no more. Or we need to reconsider a little bit.

Christina Smith: Gotcha. …

Christina Smith: I mean you've hit most of my points. We've gone over most of the stuff, but is there anything that you want to actually, say anything other about, technology just through curriculum,…

Christina Smith: and through the curricula through all the levels? Is there anything that you want to touch base on

Matthew Saponaro: So the difficulty right now so I don't see…

Matthew Saponaro: why in the younger ages right for them to not be able to be introduced to a little bit more rigorous topics. My oldest son was right this is two years ago was four years old and I never spoke to him about any of my work anything like that and…

Christina Smith: Mhm.

Matthew Saponaro: something came on his YouTube video and it was an explainer video about what AI was. Okay. then he asked me hey Baba what's AI? I'm like, I don't know what AI is with the PhD in AI. I'm like, nope. you tell me. And then he gave me his interpretation of how it's something that types really fast with super fast hands. I was like, then that's kind of really, was like, okay, we need to start having conversations and guiding that. But first of all, how did he get that?

Matthew Saponaro: That's because there was some video that exists, and it existed in the capacity that was appropriate for a four or…

Christina Smith: All right.

Matthew Saponaro: and so the funny thing is that many years ago that didn't exist. So therefore, we didn't have that. so the challenge is in the younger space is going to have the content is exists right at the upper level, but I don't see why they wouldn't be able to learn it at the younger level, but it just needs to be changed in the appropriate format. So, I feel like one of the challenges right now is to being able to have some type of tool that teaches at that level. so some of the things that we're working on right now is to some we have these little coding problems that we have.

Matthew Saponaro: It's very micro exercise type of things and they'll have 60 that they have it to do at a time,…

Christina Smith: right? Prank.

Matthew Saponaro: but each student can go at their own pace, And it can give you feedback immediately and it doesn't have to have all that and just that those tools don't yet exist yet, but we're slowly working on it. we're slowly working on as a society, but also individually there's starting to be some more things that are available. something came across my inbox the other day. It was like AI AI4K through2.org. I like that idea, but it's great. So people are starting to think about it. So there's that contemplation about there.

Matthew Saponaro: It's just that it's not there yet in terms of tools that are available to teach them.

Christina Smith: Right. Right.

Matthew Saponaro: So, how do you appropriately teach, a child, a kindergartener what AI is? Right.

Christina Smith: No, I fully agree because the age group that I working with, one and two-year-olds and we're not allowed to use technology, but yet technology is all around us and while we may not directly be able to the teachers have to use it and it needs to be accessible for us and therefore the kids then see us.

Christina Smith: …

Matthew Saponaro: So the funny thing now again and I don't consciously anymore now that Allen's been my oldest six-year-old he asked me I try to talk to him about it but sometimes there's too much to teach him right so I never told him about chat GBT one of his friends told him about chat GBT one of his friends said hey just chat GPT it. So, the six-year-olds are talking amongst themselves about chatting stuff.

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Christina Smith: Right. Right.

Christina Smith: So then how do you ethically try and make sure that they're using it appropriately and without then being used to say bully or to use it using it in some inappropriate way that could be harmful

Matthew Saponaro: All right. yeah, I mean I like to follow the Chinese school thoughts, it's through repetitive ethical moral discussions and essentially training. It says that any unruly person will eventually become ethical and moral themselves. So start from the get-go.

Matthew Saponaro: You have ethical people, they will also be e an ethical area, they'll create an ethical. and so it's a much different more challenge than saying that there's people that are going to be abusing it. that's depends on your school of thought.

Christina Smith: right? Yeah.

Matthew Saponaro: And there's going to be pros and cons to each one of them. So, Thank you for having me.

Christina Smith: Absolutely. I agree. I mean, if there's nothing else that you want to talk about, I really do appreciate you doing this. I will end it the way that I started it. so we would like to thank Dr. Matthew Sapanro for joining us on Digital Chalk Talk podcast. Thank you Dr.

Christina Smith: Sapanero for sharing with our listeners and other educators the exciting ways you're using learning technologies in education. So I do appreciate Thank you so much. And

Meeting ended after 00:37:20 👋