Teaching and Learning Bytes: Transcript of September 27 Session

The following is a transcript from the audio recording. Due to extenuating circumstances, video is not available.

Begin Transcript

[Inaudible] to our Teaching and Learning Byte Series, my name is Deone Zell. I'm the Director of the Faculty Technology Center. We're very excited to have you here with us today. We will be talking about digital content and creation and podcasting today. So, we're gonna focus on how faculty and students can create digital content, that means audio, video, texts and use it to supplement their own teaching and learning. So we're very happy to have two guest speakers. We have Paul Wilson from Biology and Scott Jones who is an Apple distinguished educator. In terms of the line up, we'll have about a half an hour with Paul from 12:30 to 1 o'clock followed by Q&A from 1:15 then we will move on to Scott Jones for another half an hour, have a Q&A with Scott Jones from about 1:45 to 2 o'clock and then we do have a hands-on workshop for those of you who are interested in staying which will begin in about 2:15. So before we continue, a couple of technical announcements. This is being recorded, but not streamed today. If you do have a cell phone, please do turn it off, so that we don't have any interruptions. And with that, I think we're ready to go ahead and introduce our first guest speaker who is Paul Wilson. So, Paul is a professor in the Department of Biology here at Cal State Northridge where he teaches classes in evolutionary biology, plants and animals of Southern California and beyond. He and his students work on a wide variety of topics including floral evolution in penstemons, I hope I got that right and the macroevolution of California's bryophyte flora. He's received a number of awards including the College of Science and Math Bianchi Research Award and was recently awarded CSUN's Outstanding Faculty Award which is the highest honor that can be bestowed on a faculty member here at CSUN. So today, he'll be talking with us and showing us actually his Evolution Report series which are interviews with famous evolutionary biologists as well as his newest work on videos using beautiful podcasts that he's created. So, with no further ado, let me turn it over and welcome, Paul Wilson.

[ Applause ]

[ Pause ]

Thanks a lot. Thanks for the opportunity to hopefully present something beautiful and clear and we'll see if I can live up to that introduction. So, back in the day, I was the thing in AV, but that was when razor blades and scotch tape were sort of the thing. And I presented a lot of my classes with overheads, just a piece of acetate and an overhead projector or with 2 by 2 [inaudible] slides. And then PowerPoint came along and I don't think I've really ever adjusted to it. It's sort of made me a dinosaur and I think that that has something to do with having to have a picture up all the time. Like I would have thought that I was really a visual learner, that I was really a visual teacher, but actually, I'm not that visual. And so, I was kind of led from there to develop more auditory teaching and then of course to put them together, too. So I think that first--that those first few years after PowerPoint and the first few years of online teaching, they were kind of the dark years, but now, we've entered a new generation of technology that allows us to bring in audio when we want to and also I think we've become more savvy
about the way that we handle visual aids. Okay, so moving ahead here. I'll start by just telling you a little bit about how I developed the Evolution Report, and then I’ll show you a pretty long clip, 5 minutes of the Evolution Report, so that you can kind of get a feeling for what it is pedagogically and how it would differ from radio. Now, after I did the Evolution Report, I developed some movies for my moss class which I call the moss movies and with my graduate students and those are very visually oriented, but they do have a voiceover and I think the voiceover and the soundtrack really make the difference for those. I won’t show you any those because I don’t have the time, but then at the very end, I’ll show you what I’m working on right now, just to kind of give the presentation some currency. Okay, so the Evolution Report started out by me sort of realizing that the students didn’t have enough time to study, but did seem to have enough time to walk around with ear buds and this newfangled device called an iPod at that time and they were driving, you know, hours a day and exercising, listening to things with their iPods, so I thought how maybe I could kind of capture some of their downtime. Now, at the time, if you heard something on the radio about evolution, it was either really politics or it was pretty much wrong. I don’t think that’s really true right now because of this great show called Radiolab, which has lots of evolutionary stuff on it and a few other ways that you can get at miscellaneous evolutionary stuff. It's sort of for the radio that you would get at through the computer. So I thought, well, almost everything I've ever learned about politics, I've learned by listening to radio endlessly and I think I've sort of build up some level of sophistication. So maybe if I provide the students with lots of time on task, listening to evolutionary topics, not really carefully but a little bit carefully that it would sort of sink in. And then after having had that supplemental instruction, when I came to it on lecture, it wouldn't be a foreign topic and they would be able to absorb it better. So, it wasn't the primary medium of instruction, it was always supplement instruction and that very much colored what it would become. So the first thing I did is I thought, oh well, we've got all these people who are lecturing on evolution all the time, I'll just record them and then I'll clip out the good stuff. So, I recorded hundreds of hours of the most fantastic lecturers on campus who are highly practiced professors and I listened to a lot of it and I was just overwhelmed, you know, like there was no way I could clip it out easily. It would be too much work. You had to kind of listen to the whole thing and be bathed in their way of teaching. So, that didn't seem like it was gonna work, so then I thought, okay, well I'll just speak to the recorder myself. But it felt kind of awkward and so, the next thing that I tried was an interview with one of the other professors who teaches evolutionary biology and I thought the interview just went fantastic. It was very easy. It's very easy to talk to another person and I think anyone else listening in would be kind of drawn in almost because it's like eavesdropping. I mean it really took almost--it took less time to tape it and edit it than it would have taken me to do something on my own of like a fraction. So that was the model that I then followed through on and for each topics, more or less each chapter that you would see in evolutionary biology textbook, I had an interview with someone, usually someone who is an expert on the topic and what I would do is I would read their papers beforehand and then arrange a time to interview them. Because I've read their papers, I kind of knew what questions they would be up for answering and then I would--we would do an interview usually kind of like two takes. Like you do part of it and then maybe part of it again and go to lunch and do the other half and then do the other half again. So I had a couple of takes that I could take things from and maybe record twice as much as I really needed and then just edit, edit, edit. We would add a soundtrack and break it up and some of them turned out really well and some of them didn't. So anyway, what I'm going to do next is show you a clip and it's a pretty long clip
just to prepare you like the way in which my show is not like radio, as radio you're trying to constantly keep people's attention. And if somebody is just tuned in, you wanna keep them up to date, whereas my people are used to having audiences that last for 15 weeks, so that's the big difference.

[ Pause ]

[ Music ]

Can they hear me?

I think so.

Okay. So, [background music] I have a long introductory piece of music for each one and I think it kind of sets the tone that you're supposed to pay attention to this for a while. You know, it's like the West Wing or something. It's not like a commercial.

[ Music ]

I'm at the University of California at Riverside and I'm with Dr. David Reznik who's an expert on life history evolution. Let me just mention this, you recently won the Wilson Naturalist Award and this is really a great distinction from the American Society [inaudible], so congratulations.

Thank you [inaudible].

Let's see, I think maybe just to get started, let's talk about what life history biology is, like what are the characteristics that vary from species to species that we might talk about history characteristics?

The life history is the schedule with which you contribute offspring to the next generation. And so, part of thinking about the life history is thinking about timing. It's the time interval between when you're born and when you first begin to have offspring and then it's the time in between each event in which you produce offspring and then the end of your life that you cease to produce an offspring. The other component of life history is how many offspring you make, so that for some animals, they may make only one baby at a time and some may produce on the order of hundreds of thousands to millions of [inaudible], small legs at a time, so there's a lot of variation of how many. And then the third way to think about it is the quantity of resources that you devote to propagation versus other things, so that I'd like to think of your life as being like a pie and the pie is divided into different slices and one of those slices is maintenance. It turns out that maintenance is mostly, for us, it's most of the energy that we consume and resources that we consume go to supporting our maintenance. Then some goes to grow and some animals who grow throughout their lives, we happen not to. We stop growing to maturity but other animals will grow continuously.

A lot of [inaudible], well, they slow down to keep up growth.
Yeah, fish and reptiles have equal [inaudible] intervals. And the growth is important because with animals like the fish or reptile, the bigger you are, the more babies you have and so it's kind of a tradeoff. If you put more energy into growth, it means you put less into having babies now but it means if you're bigger in the future, you're [inaudible] in the future [inaudible]. The third slice is part of the life history that's when people usually don't think of and that's storage, fat storage. You don't think of fat as being adaptive because usually for people, we make more deposits than withdrawals and it's a problem but most analysts--

The modern people.

The modern people.

Once upon a time, it would have been great to have some fat.

Yeah, but for animals fat is actually--serve as a strategic way of using resources. It's a way of getting resources now when the food is available and setting them aside so that at some later point, when they get better time to have babies, you can now take those resources to the offspring because the time when you have food to eat is not necessarily the best time for babies to be born. So a lot of times, you'll see animals at the end of the reproductive season storing fat and then having babies in the late winter or early spring the following year when there isn't that much out there for them to eat, but when it's [inaudible]. So, for example, black bears will give birth when they're actually hibernating and the babies will sustain themselves by lactating, by getting milk from the mother and the lactation is supported by fat reserves that the mothers stored up during this year. So, fat is actually an important component of our history [inaudible] when I think about it. And then the fourth slice of the pie is reproduction. It's the amount of energy put directly into making babies or sustaining babies. So you have four slices: You have growth, maintenance, storage, and reproduction. And the important thing is that the pie is a finite size and what that means is that if you make one slice of the pie bigger, necessarily you make other size smaller. If you grow more now, you're taking energy away from other types of functions. You can store now, then again you're taking energy away from [inaudible] reproduction.

[ Pause ]

Okay, there's Reznick and there's me and I just--I kind of like/love that art where he's being a straight guy and I'm kind of being a little bit goofy. Pie, it feels like I'm eating different slices of the pie. Okay, so that was a little clip and of course, the Evolution Report is long because I'm trying to convey a lot of information and I'm kind of trying to convey it in an integrated way, not just bullet points. So, there're some things that I've kind of learned from the Evolution Report, from doing the Evolution Report. I wouldn't do it the same way again if I started over and so mainly what I have to give you is all things, not to do because I did. Okay, one thing that is super important is sound quality like I have some really great interviews that are totally ruined. People won't listen to things that sound bad. Now you can be amateurish, but you can be amateurish and very entertaining and it can work just fine. What you can't do is have a lot of background noise or scoochie sounds, so just to really think it's horrible. Now in my head, my voice sounds horrible, but when I listen to myself, it sounds so much better and so I can listen to the Evolution Report over and over and over [inaudible] because it gives me this great boost and I
hear that not everyone is like that. But anyway, sound quality is super important. I would say get a pair of microphones. Everybody has to have their own microphone, otherwise you're probably gonna crowd their space and avoid white noise if at all possible. Unfortunately, lots of rooms of academic institutions are just hissing all the time, so you've got to try to get as far away from all that noise as possible. Luckily computers have gotten quieter as time is going on, but there's still air conditioning. And then really edit, edit, edit. You know like—it's just like writing. In order to produce something great, you have to work with the material a lot. And for an interview, usually the easiest thing is to chop little pieces out as you go along. You can rearrange things some, but it's a slippery slope once you start rearranging things. So, it's good to have it planned out pretty well in advance, but it's fine to have tons of extra stuff because you can just chop that out before anyone hears and then you sound so much more. Now, I would say following my kind of stumbling upon it, consider a conversation. I think it's a lot easier to do than presenting something entirely solo. You don't have to kind of script it out as much and it's just, it's like a very natural thing for humans to talk to one another and unless you're my mother, it's not that natural for you to talk to yourself. So, listeners will key in on that like if you're—if you set it up so that you wanna keep on talking, they'll wanna keep on listening. And then here's the hard thing is you'd like to make it short because people's attention span is not great. But here in the ivory tower, we'd like to go long because we're going for depth and sophistication that we want some subtlety. And so, that's sort of the trick that you have to work around. I would say if I had to do it over again, I would chop it up into smaller pieces and kind of string them along from episode to episode rather than have great big long things, but I really do like the great big long things that I produce.

So, you know, that's gonna have to be something that you work with. Then kind of broadening it beyond the Evolution Report, I guess I feel like use visuals, but use visuals only when you need them. You don't have to be changing the slide every 30 seconds. It tends to make it so that people zone out and they don't kind of make it their own. They don't really sink their teeth into it. There are classes that I teach that are very visual where I'm teaching lots and lots of species of organisms and for those classes, I do have lots and lots of visuals. But evolution tends to be a fairly abstract field. We have some diagrams and things, but a lot of it is fairly platonic. And so, it's very natural for the Evolution Report to kind of become this Socratic exercise where I came with these 50 questions for the expert and the expert would then give long discourses, really kind of delving into things, sinking their teeth into it, digesting it, making it a lot better than anything that you would just listen to in a 5-minute segment. And then music really makes a huge difference. If you break things up with music, if you set the tone, before a piece if you have a little swell of music and a pause in between things, it can make the listener wanna listen a lot more and kind of feel it. And this sort of really brings me to my last point of my lessons, although don't get up yet, I still have some thing else to show you, and that is try to capture the emotion of the topic and then reaction, be clever, like there's always little wonderful clever things that I like about the average report. Okay, so without further ado, I'm going to move on to what I'm working on now and this is a lot less polished. I'm a lot less kind of proud of it. We've had this huge budget crisis that all of you know about in California and part of that is that we had to cut some money out of something and so, I decided to cut a class that was spending a huge amount of money and substituted an online course that could convey the same information, but then we wanted to try to make it more
fun, not just facts. And so, we'd make these videos to try to introduce each little segment and I'll show you just a shorter clip of one of the videos.

[ Background Music ]

So, we have this little intro at front of every, of every episode.

[ Music ]

[ Background Music ]

I think this guy is hilarious.

Okay, now we turn to a totally different embryo than the frog, the chick. And we start with the chick egg which is very different from the frog egg, very different from the sea urchin, amphioxus. The chick is a big egg and you know when you have your eggs in the morning, you have a cute egg. That's a single cell. The chick egg is a single cell. And if you crack open the chick egg and put it maybe in a dish, you'll see a little tiny white cap on top of the yolk, very small, that's where the nucleus is. That's where the non-yolky cytoplasm is. That's where the whole embryo will develop from, this little cap, and that's the nucleus in there. That little cap of non-yolky cytoplasm is called the blastodisc, and this is all the yolky cytoplasm, that's the yolk of your egg. Okay, cleavage in the chick is very different than cleavage in the frog and sea urchin, amphioxus, it's what's called incomplete cleavage. This little blastodisc cleaves but the cleavage point cannot get through the yolk because the yolky cytoplasm is much too dense, so only cleavage occurs in that little blastodisc, so you get cleavage and this blastodisc is now cellular and we call it the blastoderm.

Okay, I think I'll stop there. It goes on, of course but, let me get rid of this thing. I don't need this anymore. So, there's the embryology thing and that was Dr. Steve Oppenheimer and then the video was shot and then edited a great deal by Brian Smith who is a student in television and film. So, this is by a collaboration between the Biology Department and Television and Film and we're paying them a tiny amount compared to a huge amount of money that we're spending otherwise on the course and I think it will be a lot more fun for the students than just the straight information. So I guess with that, we could go to questions? Yeah, Gail [phonetic]?

This was clearly a--I presume a created [inaudible] talk about how it influenced you to do the part of your research, did it make teaching more enjoyable, what effect did that have on [inaudible]?

I was supposed to repeat the question, so if I can paraphrase, the question is how did it affect me, how did it influence my creativity or draw me in. And well, I--gonna put me in the movies, like [laughter] I felt like a radio star in a way and the--it was great for the Evolution Report especially to be able to read up on all the papers of these experts. And we--it would almost be like doing a little biography of each of the experts and then go meet them and talk about their work with them. That was really exciting for me, and then kind of treat it as though I were a reporter bringing this back to my students. It was a really kind of tight marriage between my intellectual life that it's kind of quasi-volunteer and my work life trying to get students to appreciate the world as I see it and then hand them off to you to appreciate the
world as you see it. So, yeah, I enjoyed doing it a lot, although I wouldn't do it unless somebody [inaudible] assigned to it because it's--it is a lot of work. Yeah, David?

Yeah, this is great. I loved your ideas about what makes it work for the Evolution Report, things about sound and editing and things like that. And now moving to the--creating these tips for the embryology online lab, would most of the same things hold true and of course, this is a visual meeting, so it's a little bit different but what tips would you give for that?

Do I really have to repeat the question? Alright, the question is he loves me and then he wants to know what's the difference between the Evolution Report, which was entirely audio, and this embryology lab which is more like an [inaudible] job and it's audio-visual. Now, the embryology course or the lab part of it, which is what this is supposed to be doing. It's an almost entirely visual and straight facts. Before we intervene what it was is there's several hundred prepared microscope slides and you had to learn them and they're two dimensional and put them into three dimensions in your mind with a whole bunch of terminology, so it's a very dry course, stuff scientists have to know, but it's not that much [inaudible]. So--and of course we have personnel involved there, too, whereas with the Evolution Report, it's just me, you know I could do whatever I want. For embryology lab, it was already visual and they have--they got to learn those slides. Now, they're all online instead of looking for them through a microscope. So what our goal here is to make it more human. I'd do anything we can to make it so that this material doesn't put you instantly to sleep and Oppenheimer is really good, it's just being pretty straight about what they need to know and then also being this complete goofball on camera. So, a lot of it is voiceover but we do have these clips at the beginning that where he tries to motivate things and I just think the way that he says stuff is kind of funny and so he capitalize on that a lot. Scott.

You said at the beginning that this is something [inaudible] to the primary lectures about that, you find that it is changing your learning outcomes, students are having that additional resource is it moving, is it making a difference in your outcome [inaudible]?

Okay, so the question is how has having supplement--this--these supplemental instruction materials affected our staffs and our--our--how--how we assess the success of the course. Embryology, we don't know yet 'cause you know we just started putting it up. For the Evolution Report, no I don't know that it changed the course that much but that was probably my choice because I made it supplemental and I didn't make it really strongly required for my course, it was a lot like a textbook. Probably a--a reasonably smart, well-prepared student could get a B minus in the class just by showing a--looking at the--the written material that I put online that summarizes my lectures or studying, all that dry stuff. So we ran an assessment of course and they used it about the same amount of the textbook which is not a lot, and some people love it and some people drop it like a stone. So I think that the main effect it has is that the people who are already freaking on evolution, a fair fraction of them, kind of got swept into this whirlpool and have now gone on to PhD programs on evolutionary biology where they will then teach [inaudible] material.

Did you say that--that--among those who were in the evolutionary biology course, some of them want the evolutionary report, some of them dropped it, did you--do you know why that is--it's same group
that are grabbing everything, you said the text was read by some, not by others, is it just with the same set of students--

I--

who are doing everything?

Yeah, so the ones that dropped it, dropped it because I'm letting them. I mean, I'm not holding a stick over them and forcing them you gotta do this, you gotta take quizzes at the end of each section, you gotta learn these materials, it's gonna be in the test. Well, you know, like I could hold a stick over them and make them do it but I didn't want to make the supplemental instruction like that. We already have part of the courses like that and they're pre-meds and, you know, whatever, that's fine. But yeah, they're dropping it because they got other things to do with their lives and the ones that like it, I think, that you kind of cut it up the pie a little bit. So there're some people who just like reading and they don't mess around with the Evolution Report. There's other people who would naturally just listen--they're auditory learners and they would--they would naturally listen to a lot of stuff and, you know, they are the ones that--that caught on to it and they might not be the ones who read every chapter that I assign in the book but they were generally good students. Maybe I didn't [inaudible]--maybe I didn't repeat the question [inaudible].

Let's talk about it

Sure.

What you put together is--is a masterpiece. What advice [simultaneous talking]? No, it's not really a masterpiece 'cause the young just said what I put together is a masterpiece. Actually I don't think it is. I think I could do a masterpiece but what I really need for that is I need a sound studio, I need--I need a sound guy, you know, I need some--I need some other things to do it. It's really kind of amateurish but I'm not embarrassed by that at all because I think the content can--can carry the show for--for academic type people, but anyway, your question was?

Was what advice would you give the faculty that haven't done this yet but are intrigued and would like to start?

Well, I'd say the--the most important advice is don't do what I did which is think I could do everything without any advice. Go find somebody who knows about sound and get a little bit of help. You probably don't need a lot of help but just a little bit of help to kind of get you set up, spend, you know, a few hundred dollars. You--if you've already got a Macintosh or, you know, everything is pretty good, all you need to do is get a few extra little things, a couple of microphones, you know, so that you can keep--track of separate tracks and get a little bit of advice. It's technical advice to--to make it so that you don't have to throw away great episodes because you didn't do report [inaudible]. So that's--
Well, I thought about starting over but see I--I get sucked into taking care of the university and, you know, managing the budgets and stuff like this so, if they'll--if they'll let--let me go and go back to being a professor then we'll see what I'll do. Right now, I don't know. I might just start over and do some new--some new stuff.

Okay, so are you gonna introduce Scott?

Yes. Yeah.

Okay, thank you very much, Paul, terrific! So now we have our second guest speaker who is Scott Jones. So Scott is a higher ed instructor and a director of a paramedic academy at Victor Valley College in Victorville. So for the past three years, he's been doing some pioneering work with podcasting, focusing especially on student generating content and he's getting some really exciting results in regard to student retention and pass rates. So, finally, he is one of Apple's newest distinguished educator. So with that, a warm welcome to Scott Jones.

Hello everybody. Let me get this figured out.

Okay, well, thank you all for--for inviting me. It's--I'm very privileged to be here [inaudible] to speak to you all and to--let you tell you about [inaudible], basically the--let me talk to you about 21st century teaching. It's a funny, cool, fun things for students that we're having a good time with in the classroom and it's kind of humiliating as an instructor in a good way, when you walk by a classroom, when all your students are supposed to be behaving and you find they're actually smiling and having a good time and--and learning at the same time. Yes, you can do the same thing. They can smile, laugh, have a good time, and learn. I teach a unique program. I teach paramedics. Things we learn at paramedic school are not stuff that they really can forget, or that they won't use in their practice, not that in the general ed is any different, you know I mean, we still use general ed in our lifetime, you know, it just comes out a lot--well, a lot longer after graduation sometimes although we appreciate it. With paramedics, they have to learn, you know, anatomy, physiology, cardiology, pharmacology and these kinds of classes could either be read from the book and picture it yourself of what's happening or, you know, or--or go on YouTube and see if somebody else has done it and taught it. And what we find is that our students are getting--be very resourceful that if they, for instance, don't agree with me lecturing, they'll--they'll just go on YouTube or Facebook or some other thing and--and find a better way to learn it if I can't articulate it that enough for them. So I like your last--presenter evolved to this new way of teaching. Yes, I am a--I'm generation X, just after the baby boomers and I'm closer to the baby boomer side than actual gener--
generation X side so—but I grew up with Atari, I grew up with technology, didn't have internet, still had a black and white TV that had the two dials, the UHF and the VHF. And so, you know technology, I was born into it and so had I stopped with that I probably, you know, to be an engineer or something someday but I ended being a teacher. And the funny thing was is I'm a paramedic, I was never taught to be a teacher. What I did is I worked in the field and then one day college came calling and asked me to wanna teach for us. I reluctantly took the job and then found that it was the best-kept secret out there. So because of being brought into teaching just about 8 years ago, I—I thought, okay, good powerful white slide, talk about it, maybe get them skills lab that goes along with our paramedic training that my lecture, reading the book in the skills lab, practicing their skills, that's what was needed, that's the canned course, that's the way all the schools have always done it, that's the way I was trained as a paramedic.

And then found that, you know, we're—we're required to have an accreditation, we're required to have outcomes. We're required to have benchmarks set that if you fail too many students, in the old days that was a good school if you failed more students 'cause you were tough, you were good, most that graduated, they're the best. But that's being frowned upon now. It's being frowned upon because funding is usually is tight to certain outcomes as we know. It could still be coming down the line. And so with that, I had to learn to change the ways that I—that I teach out there and I just felt like I am not a tech teacher, I'm not a technology program. I am a--maybe general ed or what they call vocational ed career, technical ed training. Students take my class to take a certificate program. It's 42 units long. It is a--a year-long program so what they learn first day in anatomy physiology, they have to recall day 360 on a licensing exam. So, how do you keep memory, how do you make memory? How do you keep it where they can access it and it's right there ready for them to push out on a pencil or on a board--board exam. These are some things that--that I have done and I'm excited to--to tell you about today. Is this your classroom?

[Laughter]

I--you know, I was supposed to be a doctor and I took some micro--microbiology, organic chemistry classes at universities. In fact, I was--don't wanna tell university I was at but it was at UC and I had about 450 colleagues in my classroom, it was an auditorium style. And no, this, I think was a stage photo purposely but we had, you know, in a stadium, teacher down below, there was to its, literally, laid out on the floor of the rows that the teacher couldn't even see 'em and slept their way through class, showed up, I mean, they had to get counted for attendance so they met attendance but they just wanted a copy of the PowerPoint. Do your students do have--ask you about a copy of the PowerPoint? Several of our instructors at my college, that's all they care about, just give me a copy of the PowerPoint and I'm on my way, I'm good. Well, I'm telling you that most of us, the PowerPoint is not the exam, PowerPoint plus the book, in time, is the exam. So those that get that PowerPoint only learn necessarily what you have [inaudible]--you know, went over on the PowerPoint but didn't read the book and, you know, most of the students in my program, they don't read the book, we just, you know, we just flat out--the book is a resource, it is like the dictionary that's in your house or the--the old encyclopedia, you
only pulled it out if you had to look something up. And so we treat the book now, now that it's an--you
know, a book that's online, they can literally go to the search function under that book and search that
subject matter and go right to the page and even look and they'll read. They will read but they don't
wanna read the paragraphs before that, and sometimes, those paragraphs before that are the leading
into it and students are really not learning by reading just the book at times. Or they're not--do not do
anything right away, they don't--they get a copy of the PowerPoint and--and then they, you know, read
a little bit of the book and then they come to your test and then they bomb your exams, okay, and they
wonder why. They say that they studied for 72 hours a week. My students go to class for about 48 hours
a week, well let's say, 24 hours a week, I go 3 days, 8 hours a day, that gives them more other days to
learn and they will say they were--they were studying more than those 4 days. When we do--do an exit--
exit interview on 'em when they fail, they always say they study and I wondered, what do you need, you
know, 'cause it's not--it's not working. So supplemental material, I've had to try to create an active
learning environment to where, not just the skills lab that test our psychomotor skills experimentings,
but I have to develop their cognitive brain, and--and so on. And then also, they're affective domain
which is huge on how they perform out there in the field in the stressful conditions or if they're--how
they treat one another, how they're gonna be a community service personnel, they're treating the
community. We have to develop affective domain in--in [inaudible]. And classroom like this, there's no
learning there. Okay, they’re getting the rest which we can all agree that students need rest but they
will--busy the rest of their life, they'll have more fun, really if your class is for sleeping outside your
classroom is for fun, so the mobile world. We need to be moving into the mobile world, the mobile
platform, so these are some ideas that I have that can help you do that. So, today's learners have a short
attention span, you all agree? You have to keep it, you have to keep their attention, you can be a great
lecturer, I mean, I've had the privilege of being in rooms where I could really sit for an hour and listen to
that person talk, I mean, it's a dog and pony show essentially and it was meant for learning and the dog
and pony show that was done was very entertaining and I learned from it. I had a--I had a class on AIDS,
was a one unit course, everybody at the school had to take it and the guy who talked the AIDS lecture
every other slide was a photo of a vacation spot that he was at, and how did he keep that audience's
attention over such a very somber discipline like AIDS and HIV and still kept us interested, it was just
funny how every other slide, he--you're wondering, you know--then you sat in the class [inaudible], well,
that was an intense topic and then the next slide was some place beautiful. And so he was literally doing
is he was taking a beautiful picture that caught your attention visually and maybe you can relate that to
the subject matter that he was talking about. So maybe, those that are more visual learners had a better
way of making that complete story in their head over that subject matter and he found that his, I mean,
we're talking 600 students in this class, per class section that he taught, he taught this in a huge
auditorium and--and all of us passed, and the test was not easy, I mean it was detailed [inaudible]. So
attention span. The mobile market, now we can all agree that our students spend 96 percent of the time
outside the classroom and the--the paradigm of education was that you come to a class, you're
supposed to learn when--and when you're outside of class, you were given homework. Where do you
think learning was occurring, in your classroom or outside your classroom? I believe homework was the
applied learning, that's where learning occurred. Where were you [inaudible]? So my point is they were
left alone, they were given homework, hopefully they remember which you told them how to do the
homework [inaudible] and maybe they were successful to do the homework. If not, they ask their
parents, right, or they—you have to do, didn't have internet back then, you know, but you see what I'm saying? The mobile market, some mobile resources, we gotta be in their minds. My goal was to get in their minds in there 96 percent of the time. Our students have long drives. The college I teach at is--is far away, it's a--it's a rural area, it's Victor Valley College in Victorville. My students pass four other schools to come to mine, and I'm very proud of that but I take it--I don't take advantage of that. I have to keep them, they have to learn, and they have to graduate. And because they travel far distances, being in the mobile market through radio and podcasting, through something that they could listen to while they drive, well heck yeah, that's--that's a great idea and that's where we need to be, okay? Challenge based learning, used to be called problem based learning but we now call it challenge based learning. The partnership for 21st century learning as challenge based and as labeled the new learning paradigm as being a challenge based learning environment. So is your classroom a challenge based learning environment? So take a--just take--take advice from me, they want challenge based learning, students are given a challenge, they will rise to it, they will do it, depends on how you set your bar. I mean, good example, I have my students in uniforms. Would they be in uniforms if I didn't tell them to? Well, some would do it, some wouldn't, but if I set the bar you had to be in uniform to come to class, if you're not, you're gonna be excused when you're not in uniform. When they go to the job, they don't show up in uniform, they get sent home, and they do--they show up in uniform. Is there nametags so many inches from the right side of their--you know, right side of their--their--center of their jacket or their shirt? All these stuff, it's a very academy kind of format, so challenge based learning is an example of some things that we've done.

Taking the lecture, you know, your great presentation that you've done, recording them, okay, they put it up there as a resource. Not just a resource for the students in the room, you know, for the students in your class. It's not the primary learning law, okay, which we always see primary learning goes on when the lecture goes on? No, no, I--I hate to disappoint you but I--I believe it doesn't. Learning, remember always was homework when they weren't with you. The textbook, students these days are--I mean, I don't know if you've heard literally the other day in the news yesterday, we're complaining about the high cost of textbooks. Do they have to have them in the classroom? The electronic market going digital with these books has really reduced the cost in them. Do you lecture the book? Is your book the primary learning, the tool the students must have? Must they read your book? I tell you it's a resource, use it as a resource for them, just another book on the shelf, you're lecture, just another book on the shelf, and let them figure out the tools to use to learn, and then you create the classroom, more of that dynamic learning room, you know, with using--you can use clickers, you can use things like that, use their cell phones. In fact, clickers are expensive, cell phones are free. There's another resource for you, it's Poll Everywhere. Poll Everywhere is a--is a resource of teachers, faculty for up to 25, I think it's 30 students, it's free. The students, you open it up on your PowerPoint, and the students can interact with that with their phones, it will have text messaging on them. They can text their answers to the screen, everybody could see 'em and you can really see your guided learning on the room based on how your students are doing. And the nice thing about it is students themselves, you can't see each other's [inaudible] and so that what they do is I mean they--you don't have to [inaudible]. So with the [inaudible] in the room that you got 29 students, you get 29 polls, all of different names, nobody knows each others number. Well, so it's nice because you can really see [inaudible] who the outliers are and it gets the room that those
that are not paying attention and those that are slower learning will always try to follow the rest and then self-recognized by this polling method that they are not learning, they need to get off the ball and start studying. Then additional platform, if you don't think your students aren't digital, well, just take a look around, ask your students in the classroom how many have cell phones. How many have cell phones that text? How many have cell phones that you could see that takes--that takes pictures on 'em? Every one of them do. I myself, I was less digital than my students. Many of you teachers I'm sure are less digital than your students. But you need to be on my digital platform because, again, 96 percent of the time, they are not in your room. They're outside your room. They're on the internet, they're on Facebook, they're on YouTube, they're on all of these social platforms, you need to be there, your content should be there, their content should be there, okay? 'Cause the digital world is where it's going, you know, if they can't--if you can't get your lecture on the cell phone, well you're missing half your students because they're riding the buses, they're drive--or riding the car, their cell phones could be playing your audio or even your video after sitting outside. Just sitting here at the center here, at the university, there's a lot of kids in the courtyard there. Many--most of them are on the computer. Is your content there? That's what they were at, on the computer, they didn't have books open, they had their computer open. I'm telling you, you need to really try to get there. So 21st century literacy, and I'm gonna credit the partnership for 21st century learning for--for these items. They say that today's learners either have communication that many of you would agree with that, that they need to be able to communicate, okay? For those of us in the 21st--in the 20th century, that was a good skill to have, but it wasn't necessary. We didn't have to communicate. We didn't have cell phones. Our phones are at home. We didn't have internet. We didn't have email, wasn't really essential to communicate, okay? But now, they have to communicate, they have to learn how to communicate appropriately, communicate well. Collaboration, collaboration is this piece now, not that everybody gets an award at the end of the day for participating but they can learn through collaboration. Collaboration where you put your students in groups and teams, and you have to collaborate on a learning--on a problem. Problem based or even a challenge, you give them a challenge. They have to develop resource or develop--find the resources to develop an action plan to solve that problem in the room. Collaboration will get it done faster, it will get it done better because more eyes are on the product. And if as a team approach, what is that work for me in my program? Well, my students are in teams, they go out there as a team, they have to learn to communicate and collaborate together to solve a problem. To mitigate a health, hard problem or to put out a fire or whatever, it might be collaboration, 21st century [inaudible]. It was nice to have that again at 20s--the 20th century. We didn't do much collaboration at school. The book report? That was by yourself. You didn't--you didn't have help with that. What did you like better in the 20th century learning? You got to do something with a colleague, you know, like put on a skit in the classroom with a colleague, that was fun, wasn't it? And did you learn the material because my gosh, if you're presenting it in front of somebody else, you better know your stuff because you know your--your colleagues will call you out, so you [inaudible] to get them right, collaboration. Creativity. Jobs today, everybody that has an MBA or everybody that has a PhD, but there's one job, who gets that job? The most creative person that knows how to apply for that job generally catches the eye. Creativity. Did you have to be creative in the 20th century? No, we didn't really have to be that creative. It was nice if you were. I mean, if you have those three things that's right there, the 20th century unless where you--you end up, you know, you end up in good places. The creativity, taking something and developing new
front, synergy–synergism, creativity. In occasion, collaboration and creativity, the fourth C is critical thinking. This is something that’s hitting at least the community colleges really hard right now is assessing critical thinking or assessment of this in the room. How much critical thinking was on in your classroom? Are you even assessing your--multiple choice exams in Blooms Taxonomy are just assessing knowledge, not assessing creativity, critical thinking. The new approach now is create scenarios, create scenarios for assessment. Just start thinking about critical thinking. You know, they have to think critically out there. What we learn in school is not always the way it is done out there in the field. They have to critically think and have an opportunity to practice to critical think. They wanna learn to practice in school. You don't wanna practice it when you’re out there dealing with patients, I mean, that’s what they call practicing medicine but that's not what we do, okay? My point is, they have to think critical these days, okay? If you could think critical in the 20th century, how good [inaudible], you've gotten far. So those 4 C's I'm telling you, those are the C's that are now required of today's learners in the 21st century, and ask yourself, are you assessing those things in your classroom? Your classroom using these 4 things and the students coming out with these assets basically better than that piece of paper that shows them they have a degree but they're coming out with true things today that will get them those jobs that are required of them, those high level jobs. So think about that for a second. This next slide is gonna be on--an idea that I had and then I'm not gonna take full credit for it, I teach with two other great gentlemen, Brian Hendrickson and Dave Oleson, who we sat down with Apple when again, we're not any different than most schools. Our IT company is almost all PC and we liked Apple, so we wanted to get Apple computers for us in our offices, and get the college pay for it, so we didn't have to buy them. And upon sitting down talking to them and coming up with this brainstorming idea that--that it would be nice to get all of our students each a computer, we don't have the money for that. So, you know, 'cause the eBook was being developed and we thought, good, you know, Kindle wasn't out yet, okay, when this happened. You gotta forget that's only like 2, 3 years old, Kindle, it wasn't that long ago that came out.

iPhone is really about 3, 4 years old, smartphones are about 3 to 4 years old. So yeah, this--we have to get on the ball here because now it's starting to pass us up. So, we came up with this idea that if we bought 5, we put our students into 5 groups, let's buy 6 'cause one breaks down, so we bought 6 backpacks. We bought 6 tripods because it will be like shaky video and we bought these little flip cameras, really cheap to mount on there. The nice thing is they had a removable SD card on, I think you just plug right into the computer. And they also had a connection and they shot in super high definition and they were waterproof, which was a great value added because you have no idea what they'll do with these things and where they'll end up. So we put on those things, put the camera, the MacBook. We selected a MacBook because it came with software that allow students to create their own videos fairly effortlessly, iMovie, GarageBand, they can add audio [inaudible] for their own audio streams and several little things like that, free software. And you know the nice thing about these Macs was, is it had tutorials because I myself had never made a movie. And I mean I was scared to death about implementing this project if I never did it myself. So, but I was told that we have all these tutorials. And so, it was a big risk. So I just thought, so we decided to deploy these one to each group in the classroom and then we picked our topic, they had to make a movie, make about this as the book report. Their topic, first when we selected and this was in our--we’re gonna start at the first [inaudible], anatomy and
physiology. The first topic was describe how we need oxygen to live. And I told them it didn’t have to be-
you got to use 3 words, oxygen phosphorylation, electron transport chain and the Krebs Cycle. This is
the only requirement and the video couldn’t be more than 6 minutes because we don’t wanna watch a
movie all the day, so we--6 minutes to chop it up. And that we gave them a rubric that we developed
and then a manual we found online on student creating student generated contents, some guidelines
for them, and a photo release form for them if they shot video using the MacBook and stuff that they
can release the video because we said was the winner will get posted to YouTube. Oh man, did we put a
race on for these students, a challenge that they all wanted to be on YouTube and I don't get the idea of
fame these days but they want their 6 minutes of fame I guess, you know? And so, let me just show you
an example, and this is a video compilation and I'll talk a little more in detail after the video. But this is
the--this is the first compilation we'll see was the first video from the first class that did it. The second
piece of the compilation you'll see is a second academy what they did. And then the third compilation is
a fourth academy. And it just tells you be careful what you ask for when you do this because you might
be spending a little more money than just this standard stuff because the videos from these guys, they
can't be outdone by a prior video. So, I'll talk more about it after this [inaudible].

[ Music ]

[ Video Clip ]

And there is a green screen behind that one.

[ Pause ]

And actually, this video right here, this piece, there's just a few seconds of it. They actually used a green
screen behind them that we had to purchase for them 'cause they wanted to step it up. And this actual
assignment here was to describe--and the assignment right before this and this computer was describe
the difference between left and right sided heart attack. And then we have to all include the treatment
and you had to do it in a creative way. Well, right at this time, Billy Mays, the guy who hawked--what do
you call it--[inaudible] stuff had passed away from a heart attack. And so, these guys came up with a
novel idea, this guy on the left that you'll see, he's Willy Hays, second cousin, second removed from Billy
Mays and he took over Billy Mays' job. And so, he's hawking 2 packs here. The pack on the right is for
right sided heart attack. The packet on the left is for a left heart--sided heart attack. Talk about
creativity. I mean it was absolutely brilliant. It was--again, I did not know I had this in my classroom, this
kind of creativity that's going on. And then what they got here is that doctor, you know, who look--and
that's another one of the students actors, proved by doctors, I mean they tied this little skit into this
class on left and right heart failure, a subject matter that it took me 3 weeks to get them to understand
it by my lectures, by my skills in the classroom by that assessment over 3 weeks for them to finally pass
a darn quiz on knowing the difference. This, 6 minutes, they made it themselves and I'm sure that it
takes me 2 minutes [inaudible] time but I didn't have to really lecture on it at all. I graded them if they
got them right and got them wrong but I've never had a wrong video. They've always got it right. I gave
them a challenge and they were [inaudible]. So this is their book report, 6-minute reports, it's a
capstone activity. It was in every part of the 6 classes they go through in the paramedic program, each
class has a video required. And gave the materials to do it and like I said, the guy before me, audio is our biggest problem. They figured out that the audio from the cameras don't work really well, so having wireless microphones and have them plugged into as a separate audio stream works better and using the--you know, those cameras were I think 10 megapixels at the time. It ain't good enough anymore. So we had to spend some money and bought a--one of those high-definition Panasonic cameras that have a nice boom mic to them and that it picks up audio really well and really clean. And they now shoot everything in high-definition, green screen if you don't have it. You don't get the money at the end of the day, so the challenges of getting enough green screens, we have 3 of them and they share them throughout. They get about 6 weeks to 8 weeks to do it. So, when we looked back, the 4 season, they had to communicate. They had to collaborate. They had to be creative. They had a critical think how to get this done. I'm assessing 21st century literacy in a paramedic program, not just if they know anatomy and physiology, cardiology and pharmacology 'cause my students are gonna have to go out there and sell themselves to compete with each other. Now, video resumes are required and if you don't think you needed to be in high-definition, you'd have some kind of animation in it, you're seriously wrong. That's who they're competing with. That's using the tools that they come into the classroom and to do it. Many don't even use that camera anymore. They use their own cameras on their phones which are hard quality, the camera they have. They'll use PCs, not the MacBooks because they use--wanna use PC and that's fine. But it's there for them, they create it. Several are on YouTube and I can get you the answer on where to go from the pages but after they started with academy 12, we are on academy 17 starting in January. We have 5 academies worth of work. There are 5 videos required from each squad. There are 5 squads and each group has 30 videos a year per class and we have 2 classes a year, 60 videos times 5 years, so, hundreds on YouTube. And they use it as archive for students that are coming through the next academy. If Scott doesn't articulate it really well in the classroom, here's a video that might teach you a little better. It's only 6 minutes. Again, these kids are flying. They're flying out there--now, I'll talk to you about podcasting. This is another way that you can achieve an additional resource for your students in the classroom.

And what I found with podcasting, I again, I never made a movie. I've never made a podcast, so I mean I was scared to death to even try this. And so, I started out with using what they call screen capture system where I would just scroll my PowerPoint and voice over my PowerPoint as I went through it talking about it and try to be entertaining, try to relate the bulleted material to something they can remember auditorily or had a visual picture. The beginning, it was just literally scrolling [inaudible] and we know that that's not [inaudible] either, you know that's very again, elementary. But it's basically a digital lecture. Okay, it's really taking something and again, I would say start with--I wouldn't call it esoteric material on your room but start with something small with this. Maybe it's a certain situation that you are using this material for or a certain way to--and it used as a--a good example for English is to use a comma splice. How do you use a comma splice accordingly, appropriately? Something small that you can do, get it done digital and I'm telling you there, watch your video more than they'll come to your class. Those that watched the video say--you know, or the podcasts, listen to it prior, will come to class and now maybe collaborate with others to show others who didn't want to watch that podcast. So the idea of doing podcasts, getting your content digitally is kind of several reasons why we decided to do this. Again, I'm in Victorville, California. We live just above the Cajon Pass, 5000 feet up from San
Bernardino. At times, you probably have heard Cajon Pass closes, my students can't get to school. Does that mean learning stops? We can't, we can't do that. We have fires. We've had our school shut down because we became the shelter for everybody evacuating in our school, so the school shuts down. Learning can't stop for one reason being what? School doesn't get funding, right, if there's nobody in the classroom. So we've gone to this Blackboard, and I say Moodle, Blackboard, [inaudible] connect. There are several other platforms, all of them out there. They can house your lectures for you. If for some reason the student couldn't get to class and they're learning it, so. So, they started with esoteric and can move on up to primary information too. You need to be mobile with it. So, it's got to play on smartphones. It's got to play on iPads and BlackBerry pads and whatever. They do Kindle one that's coming out I think Friday, all these things, okay, which means if you're using video, what if you're on Apple, you can't do it in Flash. You got to do it in QuickTime or some other format. Or just do an audio podcast if you don't have that technology. That works just fine. You need to think about your deployment platform of how you wanna deploy this. If you wanna deploy it on the World Wide Web, you're not afraid of everybody downloading it, that open source, that's not a bad idea. Does your university or does your school have the available space for all service, servers and server sizes? Do they support this? So the deployment platform is to be considered. You got iTunes U. If you have an iTunes U account at your university, there you go, deploy it right on somebody else's server and the students will go to iTunes U and download your podcast, subscribe to them. In time you open up a new one, that will automatically download it to their--to their phones or to their iPads or to whatever devices they use for the iTunes U or iTunes account. It's fantastic to use this subscription platform for your podcasts. So they're [inaudible] for the new up, they can--they'll get a notification of it immediately and then come right--they'll be downloaded right to them. So, that's another good idea, iTunes U. There's Blackboard and Moodle like I said. My students have a Blackboard course for all, you know, Blackboard module for each course. And so, they just go on to a folder under course documents for that and then you'll see the lectures there, podcasts and that's what we put our content on Blackboard. And then Blackboard actually, we use--we don't house the servers in our institution. Blackboard house them back east and so we have a certain size that we'll allow and the funny nice thing is is that I'm really the only discipline doing this. So, I'll get all mine up before all the other teachers get on board and change the way they're doing the lectures. So, I'll make sure I'll get mine on board. So, jump on this early because bandwidth and server space will fill up because it's all electronic and digital. Student surveys, now, like I said I started with voiced over PowerPoint. That was--you know, again, I didn't do this before. I used a screen capture, basically you can use--there are several of them out there. I use Camtasia and what I did was I just put up Camtasia, put up my PowerPoint, talked over it, scrolled through the slides, exported it out as a movie. So, it's normally a podcast but it's a movie which is just a vodcast, I think it's the new term or screencast, whatever you wanna call it, same thing. Student surveys like digital, like digital and audio. What they sort of tell me is they didn't like me to say what the damn slides are. So now the challenge is for me is to create better looking slidebank for them. So that's where we move to 2.0, it's what I call it, podcast. But the student surveys are really helpful because if we're gonna give them a resource, it needs to work. It needs to be--this is what they say, 15 minutes at the most of vignette make chapters of the subject. Don't sit there for hours and my lectures, my podcast, did I tell you we're getting--we're 189 megabytes. You have 4 hours of me talking with PowerPoint in the background. That worked great for the long drives but for the lunch break, for the--I get there a half hour early before class starts break, for
the 10-minute breaks, 15-minute breaks throughout the day, that didn't work, you know, having them longer. So, 15-minute vignettes and you can already have podcasts done in longer--it may take some work but you could probably cut those out and make them only 15 minutes. This is directly from the students, not me. I mean I didn't know what to do. You know I just ask them and they tell you all the answers, I'm telling you. And your download time, how long did it take to download these things? So when you deploy this on a platform, go on that platform yourself and download it, and that is gonna vary like there's--like you have--you can imagine. Sometimes at work, it's got highs and lows, sometimes work environments don't let you download certain things. How are you at home? I hope you're off a dialogue now. So, if you're on broadband, see all the downloads? Now, what about on a mobile device, something that uses a 3G or 4G network with the speed of download from that, how much does it take? Recommendations is no more than 25 megabytes. That gives--you know, I didn't get--'cause on your bandwidth, that can be anywhere from about 2 to 3 minutes to download, depends on your download speed, most [inaudible] 1 megabyte speeds, 1 megabyte per second, so you can see under a minute, you can download a 25-megabyte file. Adding video and even good audio sometimes increase the download time more for you. So, just be careful with these things. These are recommendations that I have but if you're looking at doing podcasts, that these are things to consider before you go jumping in. And again, I would want your podcast, your first podcast to be really good. It doesn't have to be but if you can take some of these ideas and make sure they all work out for you, I'm sure your first impression out there for students that from you will be a winner because I'm gonna tell you right now, you go to other Ivy League universities and you go on their websites, you use Harvard for example, they can pull content off there that's very well done. And use those as examples for yourself, copy them. Do the same thing because there are trendsetting institutions out there that are really getting students to learn much better than these [inaudible]. So, here's what I think you're gonna use. I mean this is what I use and this is what I found troubleshooting the software it's on.

I use a none--I use a screen capture device or software and the one I use is Camtasia. Camtasia is 100 bucks. It's fairly cheap. You download it, there's Echo360, there's also--oh, I can't think of the other free one that gives you a little sun on it. Jin--Jing--what is it called?

Jing. Yeah, Jing does the same thing. But others don't let you edit [inaudible], okay. So, Camtasia, I found works well for--for me. I screen capture with Camtasia. I then export out that video, that screen capture as a movie to my desktop and then I take that movie and load it into iMovie and do all my editing in iMovie. The editing platform that I find the best is iMovie, okay? You can also do podcast through GarageBand. GarageBand is another great Apple app that could do very basic level podcasting but--and again, it has all the tutorials that are video, not read me files, which are--which are great. I just found that I like Camtasia the best and there are several others out there. And then again, you can start with the Kino [phonetic] or PowerPoint software that comes with--they're both available on Mac. Kino is not available on a PC but they're on. It is a--it is a Mac app that you can doctor up your slides, create a dynamic slide deck, have interactivity built into the slide deck. You can have processes or animation built into these things. And again, as you get going on this and you wanna make it better, you could really--that you would like to [inaudible] it up and make it look very visually stimulating with that--that talk,
that voiceover piece, so Kino. You've heard this time and time again, have a good [inaudible] microphone. You see over there in the right, there's two that I--I like recommending. I use a condenser mic on the right, which is just a USB--USB to the computer, external mic that provides good audio quality. And then there's this blue mic, which is the white snowball mic and many in the industry are using those to--to record their audio from--that's strongly recommended. You don't have to but I would recommend strongly you get an external microphone. It's fairly inexpensive. I think these are about 100 bucks a piece for those two. They're not very expensive but good money spent there will save you hours of frustration and students say they can't understand you or you didn't pick up audio really well. Audio is essential. And then iMovie. I do all my editing from this po--for this podcast in iMovie and then what iMovie allows me to do is to fix up transitions, fancier transitions to editing my audio piece, editing my actual lecture part. Maybe I didn't like that. And if I recorded stuff in over say an hour, chop it up and export it out. And I always export out to--through QuickTime to iMovie, so that it could be available on the computer, any computer, mobile device like an iPad--oh, and on the TV. It plays on the TV so that your students that have these great TVs could play these things on it. iMovie allows you that flexibility that I--so, this next slide is a--is an example podcast I did. We'll just get to the first few minutes and do an intro on it and then you will kind of see that this is one where I was actually doing during a lecture, well, with my students in the classroom where I had what they call a walk on tablet. It's a tablet that I use as a digital [inaudible] essentially. So I wasn't stuck at the front of the room drawing on the board because in front of my room is a screen. I can actually draw on the screen. So this was a--a type of flow chart that I created.

[ Pause ]

[ Video Clip ]

This is my first time using this tablet.

[ Video Clip ]

Okay, well I thank you for listening to me, but like I said, is what you do on these podcasts is up to you. That right there was just a--a small--a 15 to 25-minute podcast on how to do--how to describe the [inaudible] for students. It is a very basic level, lower level piece. It didn't have any physiology but it was mostly [inaudible]. So, are there any questions on developing podcast [inaudible] you could really create your [inaudible].

[ Inaudible Remark ]

[ Applause ]

[ Inaudible Remark ]

What [inaudible] said was why do--why do not--why do more of the instructors are very [inaudible] to do this, what are the obstacles that you think interfere with them to do a podcast to discuss things. My basic--and again, this is again my belief, is that teachers are comfortable. They have been teaching a long time, they taught the same way for several years, some are slowly changing, but they are very
comfortable for what they’re doing. It takes a little effort to do what they’re doing and they don’t want change. So they are gonna write it out until they retire and they're gonna--they're gonna be fine. And that is my real belief. Now, the barriers, you can’t buy a laptop today without a camera, really. You know, most of your cam--most of your campus office computers stuff goes right on there. It is Echo360 is free, so there is your screen capture, PowerPoint is free, it could be [inaudible]. It's a very good--and you may have a microphone built into the computer. If not, [inaudible]--I'm sure you can go to your--your--not IT but necessarily your performing arts department and rent a mic, you know, and [inaudible] stuff. I think they--I think it's just ignorance and then why they don't know. They--they don't know--[inaudible] their students, they--yeah, I know that they do care about their students [inaudible] that, but I think the students are great to tell them to go despite they would not [inaudible] if this teacher does this, I wish you would do that.

If more students did that, I think the teachers will listen. The students are afraid of [inaudible] to the university and they don’t wanna get a bad grade. They think that their [inaudible] their behavior in the teachers but it's that negative [inaudible]. So, I think all those [inaudible] makes a series of--either we don't know how to do this, we don't have [inaudible]. So if it is in the environment out there that students aren't asking I guess and [inaudible].

Scott, if you’re developing a brand new course, but you're not trying to morph something [inaudible]. So, a brand new course, would you do it in a different way, where a lot of factual information is outside of the classroom and--and during class time you can do more discussions or [inaudible]?

And yeah, they--what he had asked was if I were to create a new course, what would I do differently per se, would I change what--would I have my primary learning occur through this hybridization, through this--not primary [inaudible] but strong piece of kind of lecture that is [inaudible] podcast method with more of interaction and discussion and activity that we're in, absolutely yes. I would take that pedagogical paradigm of education. The hallmark is outside, lecture and test is on the inside, but flip that through the hallmark in the classroom, we have lecture and testing in the [inaudible]. That's exactly what I would do. I call it paradox of a paradigm shift in [inaudible]. 'Cause learning, it should be--it should include the professor as a facilitator. We need a facilitator [inaudible] because we're a resource. We are a [inaudible]. Students have other resources out there to learning [inaudible] to learn. We are just a book on the shelf. Some would rather open up another book, honestly, in a room. You're not [inaudible] you don’t--impacted very well, they--you don't understand. And so yeah, I think that would be the ideal room. In fact, what you said about--we're building the new [inaudible] safety center and that's when we created these [inaudible] completely around that [inaudible]. We're gonna have fun in the room. Everybody has a friend. A good example of that is give everybody a wipeout--a piece of white book. You have them pulled up answers to questions in front of everybody and--and if they don't know the answer, just put dumb [inaudible]. They're dumb, they didn't know it. And you know, the humiliation goes away and they just start realizing that everybody of their friends know the answer, then don't. It's gonna be obstacles themselves and you're in my room. That's another activity in the room. And I got that from a fifth grade [inaudible] teaching life. This is--I've been using these little white boards in the room. Again--and like I said, learning needs to be more fun and more active learning because it reinforces those 4 C's and it's gonna--then you're gonna have fun [inaudible].
Going back to the issue of assuming creative content. It really is speaking to [inaudible], it's--it is teaching too and it [inaudible] the 20th learning [inaudible] and things. One question I have is, are you seeing an effect on the [inaudible] running outcomes [inaudible]. And the bottom line is, are they better EMTs because they could answer [inaudible]?

Now, the question asked was has student-generated contents such as the student-generated videos increased the learning outcomes or they increased--students actually, are they more competent, because [inaudible]. And the answer, I can finally say yes. I do believe it is the single--well, I believe it is the--has the most impact on this and I tried it with this last academy, but I said if I can take in 25 rather than 35 students and I graduate 25 students, I don't change the way I do. [Inaudible] the same process. But I pick my content for the student-generated videos, content that I typically have failure in and have them do it themselves. Would I change my outcomes? And the answer is I have done 8--6--about, about 9 weeks or now in the classroom. We've had--their second video is due next week actually and they--they're all there. My AMP which is a 6-week anatomy-physiology, all lab based that is I lose 11 usually out of 35 right there 'cause they're not ready for it and I've--I have [inaudible]. Again, it has to be the [inaudible]. It just has to be that academic change in the way. I did not stand up and put a PowerPoint up and do it that whole semester or maybe I've done it through this hybridization and [inaudible] in the classroom. And--but I had more fun. I had to prepare a little more, you know, [inaudible] to find those things but having assets like other teachers that do the same thing in the nation. Like that site right there and Apple's [inaudible] educators, EDU, it's on iTunes U. This felt--those kinds of ways to do the things, with Apple devices right there. All people didn't have to do it. Yeah, my outcomes are changing and graduation rates are going up. I had about a 30 percent [inaudible] program and for the whole 1 year program [inaudible] go down to 12 percent graduation rate. And it's not because of learning, it's because of outside problems of high--the economy. They have to work, they can't come to school because they've got to pay mortgage or they're foreclosing. It's not that they don't wanna be there, it's because of outside issues that are affecting them in ways that I can't--I can't fix.

Right, and like what she's saying is that teachers need to have inertia, they need to--they need to embrace the technology, not be offended by it and use that technology, keep the device and use the device as soon as [inaudible]. And I will tell you, we spent--I spent 750--oh no, 7000 dollars on clickers about 6 years ago, 'cause clickers were the--when that was the age. You had to have clickers in the room 'cause you could that jeopardy thing, you know, in the room and--I was right there, I [inaudible]. Well, now the clicker comes for free. The students come into classrooms with their phones. The phones--if you don't think your students have text messaging on their phone and it's unlimited and it's, you know, they don't have max messages, you're wrong. They use texting more than they do email, you know. And so, there's a clicker for you. The software is free. I told you about it, Poll Everywhere, and you get an active learning environment. And don't be afraid of the technology. I, like I said, do not--I have not made--I take their--I made a two-minute video to be--to apply for AD--an ADE position and believe me, I have to keep it under 2 megabytes. I struggled like crazy doing it but I got it done [inaudible]. That was a
little [inaudible] but that's--that's what's required to get access to technology, to get access to a wonderful group of educators. There're thousands of them out there doing these things [inaudible] and the results are changing. Engineering, we have a good example of it. And I'm gonna tell you, that whole thing at [inaudible], that's an English teacher teaching basic skills, getting students to make a video out of [inaudible] place. English is different.

[ Inaudible Remark ]

Well said.

Yeah, I think we're there. Just in time, so--

[ Applause ]

And I'd like to thank everyone again for a very, very inspiring and invigorating and I don't about you but I walked away. I'm never gonna forget that an egg is one cell.

[ Laughter ]

Alright, so anyway, thank you again and we will see you hopefully in the next Teaching and Learning Bytes.

[ Inaudible Discussion ]