

**Bonni:** [00:00:00] One of the greatest challenges we have as educators is finding ways to make learning relevant for our students. In today's episode Dr. Bill Robertson introduces us to action science and the ways he is making his teaching relevant and creating opportunities for the most active kind of learning. I can imagine.

**Production Credit:** [00:00:23] Produced by Innovate Learning, maximizing human potential.

**Bonni:** [00:00:33] Welcome to this episode of Teaching and Higher Ed. This is the space where we explore the art and science of being more effective at facilitating learning. We also share ways to increase our personal productivity approaches, so we can have more peace in our lives and be even more present for our students.

**Bonni:** [00:01:01] I'm so happy to be welcoming today. Dr. Bill Robertson he's a associate professor in the Teacher Education Department in the College of Education and he also serves as the cochair of the Teacher Education Department at the University of Texas at El Paso.

**Bonni:** [00:01:20] He leads the division of science technology engineering and mathematics education and he has expertise in the area of science education curriculum development and technology integration. He also develops researches and teaches materials related to problem-based learning and action science.

**Bonni:** [00:01:41] And there's a lot more to his bio but I'm going to welcome him to the show now so that we can hear about one story I think will be best to get straight from him. Bill, welcome to Teaching in Higher Ed.

**Bill:** [00:01:52] Thanks for having me on Bonni, it's really a pleasure and an honor to be here.

**Bonni:** [00:01:55] The story that I think people would love to hear directly from you is about your Fulbright. Can you talk a little bit about how you actually got that experience and what it was like for you.

**Bill:** [00:02:06] Absolutely. Well in 2008 I in the fall I ended up going on a Fulbright to based in Santiago Chile. And the background it is kind of interesting. I had a friend Nora Baynham who was a Fulbright and she got back from it in Mexico and said I should really think about going on a Fulbright Bill and I said Well you know I'm not the kind of person that people picked to go on Fulbright's and she said you should really rethink it because you're exactly the kind of person who should go and she said she was a good friend and she motivated me so I decided to apply for it.

**Bill:** [00:02:42] And that's in that same time I'd had an experience where we had had a number of visitors here at the University of Texas at El Paso who came from a university in Santiago Chile. And as things what happened they ended up staying in my house.

**Bill:** [00:02:57] So we had lots of conversations and they were all in Spanish. They were you know very immersive. But the thing I found was that we had a lot of things in common concerning science education. You know the constructivist methodology and then just our approach for working with PRI service and service teachers. So when that happened I also had a university that I could target.

**Bill:** [00:03:19] And so I ended up going there in the summer of 2008 and stayed through December of through that same year. So I went in the winter and she left and came back in December. One of the interesting things about that time was I'm not a native Spanish speaker by any means. I have taken plenty of classes.

**Bill:** [00:03:40] I know I have a degree in Spanish but you know when it's one thing to be sort of academic about it or to practice in certain places but to suddenly be considered a you know an academic in another country was very challenging because not only did you have to know sort of the language of society or set another language of the profession.

**Bill:** [00:04:01] And I was placed in a department of physics and you know I'm not a I'm a science educator not a physicist and so often what would happen was I would get a lot of terms incorrect.

**Bill:** [00:04:13] And so for instance I remember them one time I would say something like You know we were talking about a certain concept like the center of gravity and I would say, you know.

**Bill:** [00:04:22] "Este es el centro de gravedad."

**Bill:** [00:04:23] ...and then someone in the audience - a fellow professor - would say "No, no, no Bill. No es centro de gravedad. Es el punto de equilibrio."

**Bill:** [00:04:36] So they would correct me.

**Bill:** [00:04:38] And then get the vibe was his. Who is this North American. He doesn't really even know his stuff you know but because I was struggling a bit with the technical language over time that got a lot better. But I think one of the great things I learned about from that is you know it's how people who are learning a second language may know exactly what they're talking about and it might not be able to express it.

**Bill:** [00:05:02] And working and living here on the border of the U.S. and Mexico and Taliban El Paso Texas and Juarez is on the other side and we have 80 percent Mexican American population very bilingual bicultural I work with a lot of English language learners so in some ways it helps me to really internalize to what English language learners would would work through.

**Bonni:** [00:05:24] One of the things I thought was so fun when I looked at your LinkedIn profile too I know that the way that they order things on LinkedIn is forced to be chronological and you actually placed you indicate that I actually got this degree in 2009 the Spanish language and literature.

**Bonni:** [00:05:41] But one of the things I really enjoyed that that shows about you is your own willingness to be a lifelong learner because that can't have been easy either. I mean going and actually living in the culture speaking the language within an academic institution you describe the challenge of that but even just going back to school after you already earned your doctorate.

**Bill:** [00:05:59] Yeah. No I appreciate that because you know it was funny because I just wanted to take some classes in Spanish and try to improve. And when I tried to take some here at Duke they said Yeah you're welcome to take classes and you need to know you need to enroll in this. Well I'm a professor here.

**Bill:** [00:06:16] You know I just wanted some undergraduate classes and they said Great you just need to enroll and so I had to apply for admission. I was accepted.

**Bonni:** [00:06:25] It's great.

**Bill:** [00:06:26] I was I was classified a senior.

**Bill:** [00:06:29] And then you know I started going to an academic program and then ended up taking 10 classes and conferred a Bachelor of Arts degree in Spanish. But then I think for me too it was a challenge for learning but the other thing is we have a lot of nontraditional students here at El Paso and many come from you know whether they return for the military or they're who have had a family and they come back to school. So even be an older person in class. I wasn't necessarily looked at as as different and found.

**Bill:** [00:07:02] And in many ways I became sort of the undercover professor and I learned a lot about students and how students live here. I'm not from El Paso so it really taught me a lot about the lives of our students. And you know how they balance work and family and you know school and everything else.

**Bill:** [00:07:20] Ironically one of the things that was funny is I would have students classmates who knew me as a Spanish student and they would show up in a in an education class and they would say Oh cool you're in this class you know you start talking and then everybody would come in and I'd say excuse me and I'd stand up and then I would have to teach.

**Bill:** [00:07:37] And they actually didn't know I was a professor. So all my professors in southern Spanish knew who I was because I self-identified but for the students they didn't so it was a good immersive experience it was super challenging.

**Bill:** [00:07:50] But again it was you know the way I think about education you know as a lifelong learner more education equals more opportunities. And with that I was able to actually go to Chile and live and enjoy an educational experience there too.

**Bill:** [00:08:03] Both of those experiences just sound like they've given you so much empathy as a professor and I I know for myself I can't ever get enough of that I'll always yearn for the ability to put on those lenses of what is like for students today. So tell me about action science because many of us who are

engaged in this conversation might have heard of action sports before. So what is action science.

**Bill:** [00:08:29] I had been in action sports and I started to try to combine things that were sort of in the realm of action sports and science. And then we started to use this term of of action science and specifically I started with the sport of skateboarding and BMX.

**Bill:** [00:08:46] I've been a skateboarder since I was 13 years old. I'm getting ready to have I'll be celebrating my 14th year as a skateboarder this year. And it's something I've enjoyed doing it's something or competed that it's something I did as an amateur or a pro and also as in doing demonstrations.

**Bill:** [00:09:03] And it's just a lot of fun. It's something I enjoy. And same with a lot of friends who did BMX but you know early on I realized there was a lot of physics and concepts in the sports that could be expressed in that also very engaging and motivating not only for the students but also for teachers because teachers would start to see some of the efforts we were doing and they would say oh this is going to help me so much to reach these this specific group of students.

**Bill:** [00:09:31] And that's the type of students they were identifying was probably someone a lot like me in school who was maybe not super interested in school all the time a little creative and you know was looking for a new way to connect.

**Bill:** [00:09:45] And I was trying to reach that that marginalized student in many ways. It started more as a live action piece that I did you know do demonstrations in school and then we started to do videos. We produced a series called Doctor skateboards action science which focused on forces motion Newton's laws of motion and simple machines and use that in schools all around El Paso.

**Bill:** [00:10:10] And then you know since then we've been really working on a lot of I'd say more big big time or maybe arena shows informal science and festivals but also using a lot more video as a way of trying to deliver primary content in science or in STEM to to learners and in sort of a video format because we find that the video is very portable very consumable and people will watch it over and over. Unlike a textbook where they really won't really know at all.

**Bonni:** [00:10:39] And I'm going to encourage people who are listening to definitely go to the show notes for this episode they'll be [teachinginhighered.com/85](http://teachinginhighered.com/85) because you've got to see Dr. skateboard on the skateboard.

**Bonni:** [00:10:52] You've got to see this. I was completely riveted when I went to go start watching them just how you are able to bring in these concepts but keep the attention like nobody's business to see the video and the power of action science. That's exactly what I did. Well you have written a book on action science that's the main title of the book but your subtitle is relevant teaching and active learning. So let's tackle those two terms just one at a time. How do you see relevance as important in our teaching.

**Bill:** [00:11:25] So often teachers want to find a way to connect with students and in many ways they're also looking to manage their classroom throughout the day. And a lot of times I hear from from students or even from anyone else they always ask the question you know what's the point. Why are we doing this.

**Bill:** [00:11:44] And I think that's something that's on the you know the forefront of every learner whether you're in a school or you're at a meeting or anything like that. It's this relevance piece. How can I connect this to my own experience.

**Bill:** [00:11:57] And so a couple of things that I think are really important about you know working with relevant teaching. You One is you have to pay attention to who your audience is who your learner is. And you also have to find ways to integrate the interests of your learner into your curriculum.

**Bill:** [00:12:14] Typically we go the other way. We try to force our curriculum into our learners. So for me you know relevant teaching is about choice it's about more students centered and it's teacher facilitated. And it also draws on the strengths of the students so whether that be in subject matter.

**Bill:** [00:12:35] You know if you've got artists you've got guitar players you've got dancers You've got sports enthusiasts you've got people who are good at language and it also draws on their maybe their gifts in the way they want to express themselves so not always asking for a paper.

**Bill:** [00:12:48] But maybe giving them an option of producing a documentary or a PowerPoint that they can you know narrate and you know doing some type of alternative assessment that can be evaluated by a rubric. The idea also I think leads to the fact that teachers are always looking for things they can use and a

big part of what I find in my approach is especially at the university is often people are more comfortable delivering theory but they're not always comfortable remembering that we have to turn it into practice.

**Bill:** [00:13:20] And a big part of what we've done here at UTEP you know we've found ourselves in the schools we are part of professional development networks and that means that we have to not only bring the theory but the theory into practice.

**Bill:** [00:13:32] And so I think that's very important that students and new teachers whether they're in a workshop or in a classroom need to come away with something they can use in the classroom and that that was something I learned early on.

**Bill:** [00:13:46] You know when I was working in another job as a program coordinator teachers would tell me hey this is great don't give me all the theory give me something I can use. So I pretty much develop team to try to develop things that are pragmatic practical relevant real world based fact that teachers can use in the classroom themselves.

**Bonni:** [00:14:07] With active learning that is one of those phrases that has a whole bunch of different meanings and if we were to go start to break that went down we'd be introduced to a lot of different authors.

**Bonni:** [00:14:18] But in your case when you talk about active learning you really really really mean the active and active learning. Can you talk a little bit about your own definition and perspective on what active learning is all about.

**Bill:** [00:14:31] Active learning for me. You know really means engaging the student holistically. For me one of the things is that you have to have a framework from which to operate. And so. Like in the book or even in my teaching of any home any classroom here I found myself in sort of a constructivist based methodology.

**Bill:** [00:14:52] And what this does is it starts with a five or a framework that you follow and engage explore explain and elaborate and evaluate. And in a nutshell what you try to do is you try to hook students or connect to them to engage them to get them motivated to be involved in the exploration you're actually turning them loose to allow them to have time to interact whether that be discussing things amongst themselves researching things you know on the computer or in the classroom maybe going outside to collect some data.

**Bill:** [00:15:28] It's a very open ended part but it's it's very you know they're very hands on and minds on during that time and very little direct instruction is happening during these two events and then as you move into sort of the explain typically students are trying to make sense of what they do and then during the elaborate phase you have an opportunity to bring in strong content to increase the breadth and depth of their knowledge.

**Bill:** [00:15:54] And then of course you evaluate students whether that be in a test or Hauran some product that they produce all of you know that you evaluate with a rubric that's a way of doing that.

**Bill:** [00:16:04] But I think you know the main thing to me is you know we're very comfortable doing something in class that we call an activity and we understand often that we've got to cover specific content but I think teachers you know need to have a greater depth and variety in the methodologies they use because I believe the activity consists of content and method.

**Bill:** [00:16:25] So one of the things I try to do is demonstrate a lot of different methods whether it's Socratic questioning jigsaw scaffolding using cooperative groups think pair share. So trying to keep the strategies different and also taking the time to deconstruct them to show like why did I use this strategy. So for me it's about keeping people keeping people engaged but also keeping them sort of on their toes.

**Bill:** [00:16:53] And I think that if you create an environment that has sort of people you know a little bit of uncertainty but also they trust you to do that you're going in the right direction and it seems fun they're willing to try different things with you so the using a different method for different content to achieve your goals is a big part of active.

**Bonni:** [00:17:14] What do you see as some of the ways that you're able to build up that trust because I can that resonates with me so much where you are really asking your students to do something that's uncomfortable for them. I mean learning should be uncomfortable for us so we're probably not getting the full value out of it. So how are some ways you build up that trust.

**Bill:** [00:17:37] So in order to build up the trust the first thing I know is that you know what I need to do is I need to drive students are learners or anyone to an area of high risk and the high ambiguity that's really where learning occurs in my opinion.



**Bill:** [00:17:51] So you know high risk because they've got to try something that you know they've never done in high ambiguity they don't know what's going to come out and that can be a very vulnerable spot for you as an individual you know in the end especially with a classroom setting.

**Bill:** [00:18:06] But that's where real learning occurs. This type of learning I'm talking about too is sort of the upper part of Bloom's Taxonomy the you know the critical thinking the analysis synthesis evaluation and creativity of your thinking and in working with material.

**Bill:** [00:18:22] But first off you have to develop a safe environment you have to give students an opportunity to be willing to go to those places they have to say you know I basically trust this guy to you know to to lead me to the place he says he's going to do it.

**Bill:** [00:18:36] So a lot of that is setting the tone in the classroom. You know I really do think that you know and even in meetings or whatever I know you know it's a very flat try to know that good ideas can come from everyone.

**Bill:** [00:18:50] I also try to let people know that their interests are important so I take the time to actually get to know people you know I talk to people for class or after class or you know we do a lot of stuff online so I'll be reading things about that they post a mental invoke those into the classroom.

**Bill:** [00:19:07] So I think that that helps to do that. I never single out a single individual. I always kind of model talking to the group and then when someone brings it forward I'll bring them in. So I'm not one who's who you will identify a student and put them on the spot I'll kind of go the other way and I think that over time they start to see you know you know hey he's he's he's breaking my interest and he really listening to me and you know in the maths terms I helped to create that safe environment.

**Bill:** [00:19:39] But the other part of my job is really to push them to get them to kind of step out of their comfort zone and to come if you will coach them through some of these places. So so how I do that a lot is all you know we'll go through an experience and then I'll basically deconstruct it and tell him why I did certain things and what I did and then I'll get some feedback from them and then I integrate that feedback so I think that's another part that they know their you know their voice is being heard.

**Bonni:** [00:20:07] When Stephen Brookfield was on the show pretty actually pretty early on I'll put a link to his episode in the show and in case anybody wants to go back to listen who hasn't been listening for that long. One of the things he described was just how normal it is for students to get angry when we put them in areas of high risk and high ambiguity.

**Bonni:** [00:20:27] And that's something that's always helpful for me to know that as an educator my goal shouldn't always be to be having everyone be perfectly comfortable and therefore perfectly happy in a class that's sometimes when you use the phrase push them and that we don't like to be pushed but then you used the phrase as you were describing it I tell them why I did certain things.

**Bonni:** [00:20:49] So you're able to go back and look at the past and say this part where you felt uncomfortable and I was pushing you here's why I was doing that. So I don't know that what I hear I hear a couple of things from you one is just a real place of empathy and then a second thing that I'm hearing though is empathy enough to also not leave you right where you are. Empathy to recognise that I'm not really helping you if we don't achieve something new and something risky and something with ambiguity.

**Bill:** [00:21:18] Yeah because for the most part I think you know learners learn and often people will complain others the students didn't really get it. And it's not you know I'm a firm believer that you know the students in our classes are the people in our workshops or at our meetings or are really smart motivated people and we just have to find a way to help them to be able to use their gifts in what they're doing.

**Bill:** [00:21:43] And so a lot of times people see themselves as as disconnected from their education and so they kind of check out and they don't see that they have maybe the skills of what they're really good at can apply to something like education.

**Bill:** [00:21:56] This has been something I've done a lot with skateboarders and and others who who often don't see them you know they see the world of skateboarding and the world of education as completely separate and you know that I'm going to make a choice and will be a pro skateboarder for Sony to drop out of school and my attitude has always been you know you can be successful in both.

**Bill:** [00:22:15] In fact I always tell people the things that made me successful in skateboarding are persistence dedication tenacity creativity setting goals those types of things made me successful in education and in fact I was more successful in skateboarding as a young person than I ever was in education.

**Bill:** [00:22:33] But I learned to apply those principles but that way of working to what I was doing in my education and in that that really helped. And that's been a big part of my mission not only for skateboarders but perched just for learners.

**Bill:** [00:22:47] You know that if they're really good at something and they can in essence master something they can probably master something else. So if they're really good at the violin then they know how hard it is to get good at it and maybe they can apply the same principles to their education or to something else.

**Bill:** [00:23:03] They want to learn. That to me is really where you're trying to it's not so much push as it is to to coach the learners and mentor but also to have faith to try to inspire them so that they can use their gifts to grow.

**Bonni:** [00:23:18] Before we started recording I told you a story about a scar that I have and I'm just so sorry you have to hear the story again.

**Bonni:** [00:23:25] I would like to apologize. So I have a scar that I have from skateboarding right down Fire Mountain Drive street that I grew up on and right on my knees because that's a great way to ride your skateboard is on your knees. Fell right on to one of those little curved cement borders that people used to put in the 1970s in their grass and sorry for anyone listening.

**Bonni:** [00:23:48] You still have those borders in your grass. They probably still exist at any rate. The scar actually has moved it used to be right in the middle of my upper lip and it has just moved slightly off to the left as my body grew from childhood. And so here's my question to you I will finally get to the point.

**Bonni:** [00:24:03] What is a scar that you have from your teachings something that has maybe moved around but you're still cognisant of a lesson that you learned from a failure in your own teaching.

**Bill:** [00:24:17] There's one that happened that night that I use a lot and it's it's one that happened a number of years ago but it continues to resonate with me. And I think also with students I work with before I became a professor.

**Bill:** [00:24:31] And you know even move for other jobs you know I was a high school in a middle school teacher. And the first I was a high school teacher and I liked being a high school teacher because one of the things you could do is you could be you know sarcastic with students and it worked really well they would get your humor and they were semi adult and you know you could have good conversations.

**Bill:** [00:24:51] And you could have fun and then I moved to the middle school or taught sixth grade and taught sixth grade science. And I remember you know I'm kind of a of the generation of like you know Airplane and you know Caddyshack you know humor and you know.

**Bill:** [00:25:07] And so a student came up to me and handed me an assignment. This little sixth grader and I grabbed it and I said Oh thank you very little which is sort of a classic Chevy Chase line you know him. And immediately he looked at me and he started to cry and and and you know at that point I realized you know I can't just wing this.

**Bill:** [00:25:28] And I had to really start to understand how learners learn in a middle school level people were all over the map. They were different places developmentally or physically emotionally intellectually. And I really had to start to become a student of my students. And I think that time had been teaching in a middle school was where I really learned how to to teach because you know what I didn't want to do was make people feel vulnerable or upset.

**Bill:** [00:25:57] You know I wanted this to be a safe place. But I also knew that I needed to change my ways so I needed to probably put a little more time into my craft because a crying student in your class will take you a long way especially if you feel like you've crossed that.

**Bill:** [00:26:12] So for me that was a wound that I kind of learned early on and you know something that I think still resonates with me today because you know it's important to understand the learner but it's also like you said to be empathetic.

**Bill:** [00:26:25] But to be kind and caring along the way because you are really you know in education you know especially at the university where the success business. We're trying to help people get to someplace they've decided they want to go. So in many ways that lesson was well learned early on in my teaching career and it's something I think that I still keep close even today.

**Bonni:** [00:26:47] Do you have any good scar stories just about your own experience with action sports anything like sharing. Because mine was just the best scar story ever but to have anything you'd like to top me.

**Bill:** [00:26:59] You know I think your story is good. Suffice it to say you know I've I've had plenty of injuries.

**Bill:** [00:27:05] But interestingly enough I've you know a lot more of my injuries came in. In other sports like high school wrestling or ball or other traditional sports that I did early on and you know like I mentioned you know I'm gay right to do my fortieth year boarding. I've had a couple of injuries.

**Bill:** [00:27:23] You know I'm moved from being sort of a young guy who would take all the chances to sort of be the older guy in the helmet at the park and then I'm ok with that you know because I'd have enjoyed this for some time. But the one thing I know about was skateboarding and I went skateboarding yesterday and I got a new scar from yesterday is skateboarders fall down and that's a big part of what you do.

**Bill:** [00:27:46] I mean gravity really impacts you and when you're skateboarding you fall down and put the other thing about that is you know as a state border not only how to fall down but how to get back up.

**Bill:** [00:27:56] And I think this is something that also resonates with people in education because you know it's not so much that we try to have all this excess you know kind of overcoming the obstacles in our lives. And maybe even our failures.

**Bill:** [00:28:10] And so that's one of the things I think skateboarders and people who do action sports can really relate to because to get to that spot where they have done something they have had to fail a lot.

**Bill:** [00:28:21] And they've also had to take a little bit of a beating along the way they fall down and they get up and I think we used that a lot as a metaphor for success. But I do think that that's something that's very internalized to me. So to answer your question you know I had some interesting scars of course. Got a new one yesterday and I anticipate getting another one the next coming us.

**Bonni:** [00:28:42] Well this is the time in this show that we do recommendations and I'm so excited because somebody actually that listens to the show wrote in and I'm going to use her recommendation to me for the broader audience. This is from Pamela and she starts her e-mail to me just saying thanking me for the podcast.

**Bonni:** [00:28:59] She's been teaching since 1973 and she says quote I'm not too old to learn new ideas. I'm just sorry I didn't find you sooner. And that was really kind of you to say Pamela and she wants to recommend the book Training in Motion by Mike Kuczala. I'm not sure I'm pronouncing that right.

**Bonni:** [00:29:16] But a link to it in the show notes at [teachinginhighered.com/85](http://teachinginhighered.com/85). And she says this book emphasizes the importance of movement for learning and not just for regular exercise. It's backed by research Kuczala also provides a number of very short simple movement exercises that can be used in class.

**Bonni:** [00:29:36] And this is something that I've experimented with for years now is just getting people up out of their seats whether it's just going around to take sticky notes I've written on my blog before about TTN with stickies if you want to go check out those posts I'll put them in the show notes too.

**Bonni:** [00:29:50] But something really magnificent happens when we get out of our seats and I also have talked before on the podcast about getting students out of their seats when they're taking exams and doing a stretch break and that really students have that helps them a lot with just if they have any kind of test anxiety just to get a little bit of oxygen flowing and do those deep breaths and everything so I am really looking forward Pamela to checking out training in motion. Thanks so much for writing in with that recommendation and pass it over to you Bill for a couple of recommendations. I know you want to make.

**Bill:** [00:30:23] The first is I'd like a break out as a nonprofit called Skateistan it is you know a nonprofit that uses skateboarding as a tool for empowerment and it really has a large commitment to working with young women in Afghanistan Cambodia and South Africa. The interesting thing about this group is you know they're they're based in Berlin.

**Bill:** [00:30:44] They're people from Australia. The leaders were originally from Australia and they're putting themselves out there working with populations that many of us might overlook or maybe even be fearful of.

**Bill:** [00:30:57] And they're trying to demonstrate effective ways to educate these kind of marginalised students in innovative and creative manners to Skateistan is a great cause and I think also a great effort that they're doing to focus on helping young women through skateboarding.

**Bill:** [00:31:13] The second thing I'd like to mention is Edutopia and Edutopia was originally set up as sort of an arm of the George Lucas foundation and now with our new Star Wars movie out. Hopefully people will also look at many of the innovative educational pieces that came out of Edutopia and it's really an educational portal which is dedicated to transforming K12 education.

**Bill:** [00:31:37] I like it because you know it gives educators practical resources that she can use directly in your classroom for in terms of your instruction your pedagogy and then the content that you might use around fundamental educational topics. It also gives great video resources that you can use for teaching and learning so so Skateistan and Edutopia are my two resources.

**Bonni:** [00:31:59] Oh that sounds wonderful. I'm looking forward to. I can't pronounce the skater's Stan skating's don't get his son was a really fun thing to go check out. I hope people will check that out in the show notes that [teachinginhighered.com/85](http://teachinginhighered.com/85). Bill what do you want to leave us with today about action science about relevant teaching about active learning. Before we close the episode.

**Bill:** [00:32:22] First off I wanted to say thank you very much Bonni for having me on the show and enjoyed being a part of it of course but I also think that what you're putting together is a great service for all of us in education. And you know I'm honored and feel very blessed to be a part of this today.

**Bill:** [00:32:38] I think the you know one of the main things I think you know we did get a recount is that you know all of us are learning and all of us have something where we can teach and contribute and and I think a lot of times when I've tried to do is create environments where where the learning is shared and people always ask me you know you've been a teacher for a long time.

**Bill:** [00:32:58] Why do you teach. I constantly reply it's because I like to learn and I think that having that sort of learning first kind of attitude as a teacher is something that most teachers share and especially people who stay in the profession.

**Bill:** [00:33:13] I would like to see you know more people you know spend longer in the profession and you know I would really like to see some of these methodologies that we've used whether it be the constructivist methodology if you want to call it active learning making the curriculum relevant practical pragmatic real world based giving students choices making things students centred and teacher facilitated the right time for that is now.

**Bill:** [00:33:37] And I also think that it's also a great time to expand sort of our body of resources not just to include things say on the Internet in the same way but to to build the new new curriculum.

**Bill:** [00:33:50] There's great ways of doing that in video by building apps but also giving people sort of experiential opportunities. So to me these are the kinds of things I think we should think about as educators and that would hopefully help keep the practice of teaching and the art of teaching at the forefront and for a great future.

**Bonni:** [00:34:13] Thanks so much for your willingness to come on the show and inspire us all in these ways and really challenge us to pushing us to get to new places and part of that by the way requires vulnerability such as things for being a safe place for us to have this conversation.

**Bill:** [00:34:29] Absolutely my pleasure. Bonni, thank you so much for having me on the show.

**Bonni:** [00:34:33] A final word of thanks to Dr. Bill Robertson for investing your time today for being on the show and especially to all of you who have been emailing me lately with ideas for the show including the one we mentioned from Pamela.

**Bonni:** [00:34:47] And I've got some other ones in the hopper too as to so much to hear from you what you're getting out of the show and also to challenge me to be pushing the envelope even further to what we might do with this podcast. Thanks so much for that.

**Bonni:** [00:34:59] And for those of you who have yet to get in touch please do so at [teachinginhighered.com/feedback](http://teachinginhighered.com/feedback) or you can touch base with me on Twitter @Bonni208 I'd love to hear from you there. And just as always I'd like to remind you if you have yet to subscribe to the show notes for the episodes.



**Bonni:** [00:35:22] You can get a weekly e-mail in your inbox and not have to remember to go look up all the links you can just go subscribe at [teachinginhighered.com/subscribe](https://teachinginhighered.com/subscribe) and when you do that you'll receive a free ed tech essentials guide with 19 tools that will help you integrate educational technology into your teaching and productivity. Thanks again for listening. And I look forward to seeing you next time.

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