Bonni: [00:00:00] On today's episode of Teaching in Higher Ed number 134, Hoda Mostafa discusses living and teaching creativity.

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Bonni: [00:00:20] Welcome to this episode of Teaching in Higher Ed. I'm Bonni Stachowiak and 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 so that we can have more peace in our lives and be even more present for our students.

Bonni: [00:00:48] Today's guest is currently an Associate Professor of Practice and the Associate Director of the Center for Learning and Teaching at the American University in Cairo, Egypt. She was born and raised in Canada and later came to Egypt and ultimately completed her medical studies in Cairo, Egypt. After coming to UAC to teach scientific thinking in 2007, she joined as a faculty member in 2011. And this time she is continued to develop her interest in and commitment to faculty development, educational technologies, and thinking skills in the classroom. She teaches Scientific Thinking and directed this multisection course an initiative from 2011 to 2015. She has also co-developed and continues to teach the course Creative Thinking and Problem Solving at a freshman level. As part of her role, she has actively contributed to the freshman program redesign pilot and implementation at UAC. She has a special interest in developing interdisciplinary courses for science and non-science majors. Welcome to Teaching in Higher Ed, Hoda.

Hoda: [00:02:02] Thanks Bonni. It's great to be here.

Bonni: [00:02:04] I know I was stumbling over your name a little bit and I definitely respect and honor people's names, could you pronounce your name so everyone knows the correct way to do it?

Hoda: [00:02:12] Well the Arabic pronunciation would be Hoda Mostafa but Hoda is OK. Hoda is OK.

Bonni: [00:02:20] Thank you. Thank you so much. I think we first met each other virtually through Maha and I and know I don't get her name very well either. She teases me when I only use her first name because there are more than one Maha in the world. Maha Bali had been on a couple of times and she said you would be a great guest. I just so much appreciate you being here.

Bonni: [00:02:43] You have a story to tell today just about your own transitions throughout your teaching. And I'd love if we could start by taking us way back. How did you get started in your career in higher ed?

Hoda: [00:02:54] Well, my career kind of started by virtue of being in a system where when you finish medical school, if you finished near the top of your class you're offered a teaching position. You're not offered any training, you're not offered any kind of formal education on how to teach, you just go through a process of OK you did well. You're near the top of your class. You get a residency. And then you move into a lectorship and you start teaching basically. Which I think will be familiar to a lot of people that start teaching sort of in that kind of fashion. But I really really loved it. I love teaching medicine. I love teaching ophthalmology.

Hoda: [00:03:40] It was a very interesting place to be because it was a public university so we really had to be very creative in how we taught large groups of students with very limited resources. That was my start but I think I was a little bit frustrated in a sense that I was teaching in a very conventional institution where there wasn't much space for creativity. You were teaching basically the same thing over and over and over again. And there wasn't a lot of focus on the teaching part. It was more- there was a lot of memorization. A lot of didactic lecturing. There was something off for me. I was looking for something else.

Bonni: [00:04:25] What's a memory that you have of that feeling of something being off of just maybe something that was a surprise as you started to get into it or just where you started to realize this is not working the way I think that it should?

Hoda: [00:04:39] I think when I reflect back it was on how I learned as a student. In our university there were huge numbers, so you did a lot of self-learning. You did a lot of self-directed learning. You found learning wherever you could. So I'd get up at 6:30 in the morning to listen to a lecture from a professor who was

offering these free sessions. And then I'd go in and borrow a book from this professor. And then I'd get a book- I had my father's version of Grey's Anatomy that I would look at.

Hoda: [00:05:14] And so the way I was learning was putting bits and pieces together and driving my own learning. And then when I started teaching I realized that students really didn't want that, they wanted me to tell them what to learn. They wanted me to spoon feed them. They wanted notes. They didn't want to go through the process of generating their own learning.

Hoda: [00:05:36] They wanted basically "tell us what we need to do. Tell us what we need to learn." And this is very common in places where memorization is the basis of the learning. There's no process involved. It's just what's the product? What do I need to know? And this was uncomfortable for me because I was very curious as a student and as a child, I had this curiosity. I always wanted to find out how things worked and why things were the way they were. And and it was just frustrating because first of all I don't know how to memorize things. I do not have a good memory. So medical school was a horror for me. And I had to figure out ways to learn things without relying too much on memorization. This was maybe part of reflecting on how I thought learning should be. That made me want to do something else.

Bonni: [00:06:30] From what little bit I know about medicine too, and that's certainly not my discipline by any stretch of the imagination. But that memorization is never going to take us far enough as physicians, as nurses, as those in the medical profession because it is not an input/ output. It's not just a rational thing that is going to be easy to arrive at problem solving or diagnosing for people.

Bonni: [00:06:58] And so I imagine that that also had to be something coming into play with your own pedagogy was that memorization isn't going to take them far enough. Even if you were great at memorizing, even if they were great at memorizing that actually the long gain for that is something a little bit different. Am I accurate about my sense of that?

Hoda: [00:07:16] Yeah. Well it's this process/ product kind of relationships. So do you teach students how to think and how to document the process of how they came to a certain conclusion? Or do you want them just to know the answer? Do you want them to be comfortable with more than one answer or more than one way of reaching an answer? Because in science and medicine sometimes there is only one right answer. So there's all this debate about open ended

questions that are open to more than one interpretation, more than one answer. But in something like medicine, that may not be the case but it's the process of how you reach that conclusion.

Hoda: [00:07:58] The documentation of the thinking process, that's what's important. And that's much more challenging to teach because it's experiential. You have to guide the student through this process of learning how to think which is very challenging in societies like ours that highlight that one right answer, that success, that reaching that goal and not really how the process works.

Bonni: [00:08:22] I even think about as you're talking, I'm getting better at that. I always want to be- I'm never going to be there. But I'm getting better at that as a teacher. But when I encounter something new in my life that I am completely in the unfamiliar terrain, then I go back to thinking that there's right answers. I've been talking about on some recent episodes of a family member starting to experience some cognitive decline and I'm just looking for the answer. Where do I get the right answer for this? Because surely someone's written it down and as soon as I check off all the boxes this is all going to be better. And it just was funny to look at myself as a learner as I start to go through different seasons of my own life.

Hoda: [00:09:06] I mean I can see how it can be uncomfortable also for people in general not to have a right answer in front of them and to have to be comfortable with ambiguity and uncertainty. And this is one of the skills that we are trying to teach students, it's on the list of 21st century skills of comfort with ambiguity. It's very important for students to be OK with the sense that you don't have to get the right answer, but you need to be able to think in a way that could possibly generate the right kind of answer.

Hoda: [00:09:38] I think this is important to teach. And what was a big contribution to my transition from teaching in a more didactic way- because that's the way I was teaching at the Faculty of Medicine- when I moved to experimenting in a different kind of course, this transition to teaching a course ON thinking was of course on critical thinking, scientific thinking, reflecting on the process of science as a way to generate information and to generate knowledge and to generate theories... To reflect on this process, it was it was totally alien to me.

Hoda: [00:10:12] It was the first time I had ever thought that there's a system, there's a process for learning and you can teach people this process. So this was

like a AHA moment for me where I sort of went into this course not knowing much and taught myself a lot. So I was put in a situation where I had to teach critical thinking. I had to teach some history of science. I had to teach a little bit about cosmology and the origins of the universe and the origins of life which was basically biology and microbiology.

Hoda: [00:10:48] It's in my field but in a more big question kind of way. A big question kind of course. And I think it was a learning experience for me because when I think back on how I taught those first few semesters, I don't think I was very good at it. I think I got better as I progressed through the semester after semester and reflecting continuously on what went right and what went wrong.

Hoda: [00:11:15] And a lot of mentorship. So I had a mentor and I had people who were sharing their experiences in the course. It was a team taught a course where everyone was sharing what they were doing. I was lucky to be in a community of learners that were developing the course continuously. But this was a very important part of my transition to being open to teaching something that you may not be an expert in but to be able to teach process of thinking.

Bonni: [00:11:44] We had an episode on developing critical thinking skills and one of the things- I'll link to that and the show notes by the way. And our guest talked just about the all of the work that she's done with different faculty and then most of the time... Well actually I think she's had all of the time, people don't have the same thing that they mean when they say I want to develop critical thinking and just how complex even that is to consider.

Bonni: [00:12:05] I'm going to find a book that was one of my first introductions to critical thinking that I'll link to in the show notes that was just so helpful to me to break it down into different compartments. I don't know if you have any that you really treasured along the way that helped you come and get your head around and a little bit more but you can feel free to share it now or you can email it over to me and I'll put it in the show notes.

Hoda: [00:12:23] Alright.

Bonni: [00:12:24] Yeah. Well tell us a little bit about what life looks like now because I know it's much different than back then.

Hoda: [00:12:30] Well now I'm teaching at the American University in Cairo. And I'm teaching two thinking courses. I like to call them thinking courses. One of them is scientific thinking. And the other one is a course that I developed about

four years ago actually after a conversation with one of my mentors where he was a judge at a science competition for young scientists. He came back from that competition with the sense that our students in Egypt really don't know how to think creatively. There's something missing. What is it that's missing in our students that we can teach them or that we can introduce them to or introduce some sort of an experience where they can learn about creativity? And for the first time at AUC we had a course on creative thinking and problem solving.

Hoda: [00:13:26] This course was co-developed. We had a professor from the rhetoric department, theater, architecture. And we all got together and came up with this modular course that addressed the different aspects of creativity: attitudes to creativity, barriers to creativity, deliberate creativity as a teachable skill.

Hoda: [00:13:48] We looked at different models. We looked at CPS, creative problem solving. We looked de Bono's model. We looked at design thinking. And we put together this course that students experience creativity as a discipline which is a way of teaching creativity in a more formal sense because that was our target, to introduce students to creativity as a discipline and to kind of introduce this mindset. Because when I asked students the first day they come in, how many of you think you're creative? How many of you think creativity is teachable? How many of you think you can learn to be more creative? And across the board our students, I'm talking about students from in our university, will say "I'm not creative. I can't draw. Or I can't play a musical instrument.".

Hoda: [00:14:37] And part of the course is building their creative confidence and introducing them to skills that they can practice and become more creative in the way they look at problems. And again it's a question of process. We want to document the process. We want them to be able to reflect on the process of thinking and not necessarily come up with these groundbreaking new innovative ideas. But the process itself is what's important for us.

Bonni: [00:15:10] Talk a little bit more about the interdisciplinary nature. I'm not sure I realize that and that's probably just because of my own paradigm. I've only ever seen courses in creativity that were discipline specific. I'd love to hear how you tackle that. How do you create an assignment that might apply across multiple disciplines as an example?

Hoda: [00:15:27] Well this is a course that has an audience that's targeted at freshmen students, their first year at university. Some of them are declared majors, some of them are undeclared, but they each come with a different

background and with a different kind of goal in how they want to move forward. Some of them want to be engineers, some of them want to be economists, some of them want to own businesses.

Hoda: [00:15:48] But the the common thread that connects the course is this reflection on creativity through learning prompts. So we'll show them a video, we'll have them read an article- so Tim Brown's article on creative confidence or positive attitudes for creativity will give them these learning prompts or these inspiration prompts. And they'll reflect on their blocks. So I co-teach this course actually with Maha Bali and there are several sections running now of the course.

Hoda: [00:16:22] But that's the central theme of getting them to think and reflect on what creativity is. What kind of barriers do they have to their own creativity? Looking at creativity as a process of generating ideas that have a high possibility of being better ideas than if they had thought about them in a more linear or conventional way.

Hoda: [00:16:48] They learn a lot about collaboration and the power of collaboration and cooperation. And they they visit the different models so we used to teach CPS and de Bono, now we're looking at design thinking because it seems to be a more generic way of looking at creativity. It's very accessible. So they're learning about empathizing with the user, defining problems, reframing problems, the power of ideation and brainstorming, the power of prototyping and iteration, and even prototyping ideas and testing ideas on audiences.

Hoda: [00:17:24] And this is where they apply that to an educational game design module that Maha Bali teaches. In that case they're they're applying what they've learned about the process of thinking creatively about a problem to an actual challenge. OK so they do two or three mini challenges where we would give them a problem and they have to think about how they would solve that problem.

Hoda: [00:17:47] So this semester we did how would you deal with the problem of people taking hand-baggage onto a plane? And then when there's a problem with the plane then everybody has to evacuate, people stop and take their hand-baggage. So how would you deal with that problem? How would you solve that problem by reframing it?

Hoda: [00:18:08] We also talked about how we would reduce food waste by changing our relationship with food. And they would look at that as a challenge. How would you design an educational game for students that had a particular learning objective?

Hoda: [00:18:22] So they do these mini-challenges and they practice the skills that we introduced to them through these inspiration prompts or through these learning prompts. And they come up with- I think for freshmen, they come up with some really good ideas. But what I think is the most powerful part of the course is the reflection because they're reflecting on their blogs sometimes twice a week and they're seeing what the rest of the class is thinking and it's kind of like a big brain for the class. You could just sort of a buzzing their ideas and they're picking up off each other and they're learning from each other. So that's I think one of the positive things for the course as well is the element of reflection and blogging.

Bonni: [00:19:04] When you introduce the first mini-challenge, do you have the common sense of resistance that we get when we're asking people to change their cultural norms that say "I am the teacher and the source of all knowledge." And that's what they're maybe used to in their educational experience, is that where you see resistance? Or are you able to release some of that earlier in the course. And by the time they get to the first challenge they're equipped to recognize that they are not going to come to you for the answers to real challenging questions that they have?

Hoda: [00:19:36] Yeah I think that is a huge problem that students are waiting for YOU to either give them the right answer or validate their answers as being good or correct, or correct their mistakes and tell them how to make it better. What is nice about teaching creativity through design thinking is because the process is iterative and failure is welcome.

Hoda: [00:20:03] And this is a culture that we introduce very early in the course. They listened to Kathryn Schulz's TED Talk on failure and how a failure is a human right and you should embrace it. And they reflect on that. We talk a lot about failure as being something that they were raised to fear. And this is a cultural thing, it's parts ingrained in their schooling. And letting go of this fear of failure is not something that's going to happen in a few weeks during the course.

Hoda: [00:20:33] But this shift in their mindset that someone tells them for maybe the first time in their educational careers that failure is a good thing and that I

want you to fail and fail repeatedly until you come up with something that you will identify as being truly your best work.

Hoda: [00:20:56] So this is something that we introduced very early in the course through either reflecting on these inspirational prompts or these learning prompts or by just talking about it in class, having discussions about it and sharing experiences. And we share our own experiences, Maha and I, on our own failures as well.

Bonni: [00:21:16] Tell us a little bit more about reflection. What's the process that you have them go through? And how does this contribute to their learning about creativity?

Hoda: [00:21:24] We do give them some sort of a guide to a reflective blog post. So I'll give them some guideline questions. I'll show them examples of reflective posts, Maha blogs frequently so I'll show them a post from her blog. I'll show them blogs, I'll repost on the class blog some reflections from previous classes because I tend to find that students sometimes just need to see an example of something that's- it's not what I'm looking for, I won't tell them "this is what you need to do." I'll say "this is an example of a student's reflective blog from last semester. And here's another one. And here's Maha blogging. And here's another person blogging." And then I'll give them some very loose guidelines and then they practice. So by the end of the course they will have gotten more adept at blogging. So to link into. So part of the reflection is if you're reflecting on a TED talk, or an article that you're reading, or a new York Times piece or whatever, how can you connect that to what we're talking about in class? Or a real life experience? Or something you may have read someplace else? Or something you learned in another course? So this ability to also connect to their context, their real life is I think a very important part of learning.

Hoda: [00:22:50] More and more I've become convinced that relevance and meaning is so important for the freshmen that I teach. They get engaged when it's meaningful to them. And the challenge is how do you make it meaningful? There are some topics like in the other course I teach, we teach cosmology and the origins of life. And how do you connect that to something meaningful for an 18 year old? And it's challenging. You need to do that to get them into learning more about concepts and ideas and even theory in something like science.

Bonni: [00:23:27] That really is such a challenge. And I certainly don't have any answers. But I think about one of the ways is to try to ignite their curiosity again because I told you before we started recording. I've got two small children and

it's infectious to be around them and just the kinds of curiosity that they have and I mean they asked so many questions every day that I can't answer and I just don't know about it yet but it's I never want to stifle it. So how could we find out about whatever it is you're asking?

Bonni: [00:23:57] And so many times our students come in and it's been ingrained to not do that, to not bring that into the classroom. I believe it's still present within them, but it just is muted when they come into some of our educational environments. So it's so fun to just be constantly challenging ourselves in that way to how do we reignite their curiosity in all of this?

Hoda: [00:24:18] I think that also a lot of students come in with these preconceived ideas of what education should be. And what the classroom should be. And to attempt to teach in a way that is different than the norm, especially with students that do come from the didactic, the conventional memorization based. They struggle a lot. Realistically speaking, it takes them a very long time to become comfortable with this idea that they can each come up with a different answer and that's OK. And this is how we're going to assess you. And it's a challenge for them, it takes some time. That's why we like to give them multiple opportunities to experience these challenges. So they do at least three in the first six weeks or eight weeks of the course and then they do a larger one near the end.

Hoda: [00:25:13] But this introduction to learning through failure is important for them to experience it while they're in a safe environment like university life. Because professional life may not be as forgiving. I can't tell them that "you're going to go and work at a big company and your boss is going to say hey good for you, you failed. Why don't you try again?" That's not realistic.

Hoda: [00:25:41] But the learning that can happen in the classroom through failure and the reflection on what they've learned, I think it's cumulative. I think with time maybe I don't know, maybe they end up failing less ina real world sense of failure. So that they're prepared. They have the confidence to know that it's OK to fail, but they also can identify what failure is. And that is not such a big deal. It's goes back also to resilience and grit. And there's a lot of talk about that as well in education.

Bonni: [00:26:18] Yeah. So true. It sounds like a wonderful class. I'm ready to sign up. This is the point in the show where we each are going to give our recommendations. And at first I thought that mine wasn't going to relate to today's topic. But I actually realized that it quite does.

Bonni: [00:26:34] I'm going to link in the show notes a really graphically rich with lots of embedded media blog post called Top Presentation Slide Decks. It is pretty much what you talked about as far as giving people examples of creative ways to approach one's PowerPoint slides or keynote or whatever tool it is that people use.

Bonni: [00:26:59] And there are at least seven to 10 different decks that you can just scroll through and see what they've done with color, and see what they've done with space, and what they've done with just minimizing the text and making sure that the images actually connect with us and what the designer is attempting to create. They're all very different.

Bonni: [00:27:20] And something that I like about it is that they're transparent in terms of what it is that they have done to create the effects. And so many times when we look to- I have a book that I've recommended often called Slideology by Nancy Duarte. And she has been that inspiration for me many times as I'm sitting down getting ready to build a slide deck for our conference, or for one of my classes, or for a faculty presentation and I can get inspiration "oh that color scheme is exactly the kind of tone I'm trying to set," or look at how they used these fonts that were slightly askew or look at this how they divided it up to make very transparent their sequencing in a particular topic.

Bonni: [00:28:01] And anyway I hope that people just enjoy going and getting some inspiration and maybe thinking a little bit more creatively about your slide decks for presentations you have down the road. So that's my recommendation and I'm going to pass it over to you to give.

Hoda: [00:28:15] I'm already scrolling through them it looks really interesting. Yeah. Going back to seeing something really does sometimes helps you visualize what you could possibly do. I guess I'm hoping that in the future that students consider our classrooms as safe places for learning. And that they're they're comfortable with reflecting and expressing themselves and making mistakes. It sounds very utopian in the sense that it's not very realistic. But I think that students do learn a lot by feeling that there's some sort of sense of forgiveness in the classroom and care.

Hoda: [00:29:04] This is something also that I've recently become very cognizant of that it really makes a difference when your students can see and sense and really understand that you really do care about their learning. And from a personal perspective, this is something that I think I lacked in my higher

education, that I didn't really feel that many people cared about how I learned or what I learned and I really had to be self-motivated. And it was a struggle.

Hoda: [00:29:33] So I hope that in your generation of students don't need to struggle the way we struggled or I struggled. It's a personal story. And to embrace failure. I think that this is a cliche of sorts. I've seen the little, something changes in their in their eyes when when you tell them please fail and try it and we'll do it again until you get something that you are proud of.

Hoda: [00:30:00] And I think this is what I've really benefited from from transitioning moving to where I'm teaching at a liberal arts university that I'm teaching freshmen, I'm teaching students in their first year of university. And it's very inspiring it's very rewarding and I really love doing it.

Bonni: [00:30:18] Well it has been such a pleasure talking to you and I have made lots of notes of things that I'm going to link to. And if I can't find them, I'll email you. But I just want to thank you so much for investing your time in this community. I know you mentioned that you've listened to some of the shows too and it's I can tell that as you're sharing because it's just fun as you've contributed so much to this ongoing conversation. Thank you so much for your time and your gifts.

Hoda: [00:30:41] Thank you Bonni. It's been great talking to you.

Bonni: [00:30:44] It was so wonderful to have this conversation with Hoda and to just discover all these ways we can think more about our own creativity and bringing that into our teaching. Thank you for the gift of this conversation and thanks to all of you for listening.

Bonni: [00:31:00] I'm hoping that you will consider going to the show notes at teachinginhighered.com/134 and let us know any other resources you're aware of to help us bring more critical thinking and creativity into our own teaching.

Bonni: [00:31:15] If you have yet to subscribe to the weekly newsletter, that's something to think about doing because it's just a single email on a weekly basis where automatically all the links to the books and articles and Ted Talks that were talked about on today's episode and every week's episode will come into your inbox along with an article that I've written about teaching or personal productivity.

Bonni: [00:31:34] You can subscribe at teachinginhighered.com/subscribe. And when you do you'll get a book, an Eguide that will introduce 19 tools to help enhance your own personal productivity through technology and also some educational technology. Thanks so much for listening and I'll see you next time.

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