

Welcome to Turning Conscience Into Action, the Earth Charter podcast. Join Mirian Vilela, Earth Charter International Executive Director, in her fascinating conversations with great thinkers, scholars and activists from around the world who are working in the fields of sustainability, ethics, education and social transformation. Our purpose is to generate new insights on how to face current global challenges and inspire informed action.

Today we have the pleasure of having Sam Crowell with us. Sam is Professor Emeritus at California State University, San Bernardino.

And Sam has done quite significant work in education, in transformative learning, and also with the Earth Charter over the past 20 years, at least with the Earth Charter. But you have been in the field of education for a long time. How are you today, Sam? I'm wonderful. It's so great to be with you, Mirian, and the audience as well. So I look forward to the dialogue together. Yeah, so Sam, you have your work with education, and it goes a long way back. You had some co-authors in the book called MindShift, or in a project around mind shifts.

Would you please share with us what were those books and articles, and how did the idea of all of that started? That is going back a ways, Mirian, and I'd love to kind of revisit those. MindShifts began as a workbook, actually, on how to work with teachers and educators on transforming their schools and their classrooms based on how we learn, especially in terms of the new research that was coming out on the human brain and how the neurophysiology, the understandings and neurophysiology could inform what we do and how we act in the classroom.

So Renata and Jeffrey Cain were researching this in a very deliberate way, and one of the first books that was written on combining the research and the neurosciences for educators was their book Making Connections, Teaching and the Human Brain. And as we began just dialoguing together, my work had been mostly in systems thinking and in quantum mechanics and holography, looking at the world in very different ways. How do we apply systems thinking to education? How do we take some of the main ideas and concepts of quantum mechanics and see where that leads?

And so these ideas were wrapped up in our dialogues and conversations together. And we said, wow, how do we, they kind of merged together. They seemed to come together in very interesting ways. Our first question was what would happen if we created classrooms and schools based on how we learn and not only on the methodology of teaching, what would be different? And we took the principles of brain-based learning and began to apply that to our understanding of learning and how to inform teachers about this process.

Some of those things was that the brain is a living system itself, just as human beings are living systems. And what does that mean as we apply that to the classroom? And the brain mind is social. It constructs its understandings from a social reality. And the neuroscientists have been able to document those changes even in infants' brain cells. So we started looking at the social nature of learning. And that wasn't brand new, but it was consistent with some of the research that was being done in other areas in education and learning.

We also realized... When were you doing that? Was around which year? This was in the early 90s. Early 90s. Yes. And what was the title of the book? Well, their book was making connections, teaching in the human brain. And so we began to create a workbook for teachers that would explicate those ideas in more practical ways. And that's what MindShifts was about. And so as we looked at these principles of the brain, brain-based learning, we started seeing that meaning was important, that patterning was necessary, emotions were critical to patterning, that the brain perceives both parts and holes simultaneously.

And it involved both focused attention and peripheral attention. And then the brain also learns in conscious and mostly unconscious ways. And there are multiple ways of processing memory. Learning is developmental. It's enhanced by challenge and inhibited by threat. And we're very unique and we need to act on not only our experience, but on the learning that we're pulling together. So those are the things that we emphasize and try to explicate in a workbook. And we created something that we called the MindShifts process.

And that, importantly, was about groups of teachers, small groups, working together and processing these ideas over time to explore the implications that they had for their own lives, their own sense of learning, and then later on what it meant for their classroom and their teaching. So that was what the workbook was about, how to help teachers actually work through that. As we implemented it in a school, working with a school that's three of us over a five-year period, it literally transformed the school.

So you actually implemented those ideas also in a school. Where was that in Southern California? No, it was actually in Sacramento, California. We received an invitation from a principal saying they had read the book and would love for us to come and work with their staff. And we said, well, yes, we'd love to do that. But we would like to make sure that it's over time and that the staff is fully committed. We don't want to impose these ideas or force feed a set of ideas like typical workshops can often be.

That seems to be a wonderful opportunity. You wrote a book and there you were. You had a space in which you could implement those ideas in a school. And that was early 90s, mid 90s. Is that right? Yes, yes. It was absolutely wonderful. And this school was near the bottom of the achievement level in the district. And it had a very transient population. Many of the children, most good number of the children were on free lunch. And in the US we have something called the TIDA-1 program that is for financially deprived students.

And so yes, we started implementing these ideas in the classroom. The teachers did. Not us. And in a year and a half the school was at the top of the achievement charts in the district. It happened so much more quickly than any of us would have imagined. And it became both a laboratory for us and for the teachers as well. This is wonderful Sam. What a wonderful opportunity. I suppose this was somehow related to the work you did. You were the director of the Center for Research and Integrative Learning and Teaching.

Yes. But you also part of this master program in holistic and integrative education. Was that the same? And how was the relationship between these two, the work of your

center and the master program? It was very close. In fact, they went together. We created the center where we could actually take some of the ideas that we were beginning to implement in the school and say, well, let's start to see what this would look like in a graduate program. Let's actually model this teaching in universities.

One of the things I saw was that we would often talk about very innovative ideas, but the mode of instruction was still encased in older and more traditional methods and methodologies. So what would happen if we actually took these ideas to a graduate classroom? So I wrote a small grant and we pulled together 14 different departments of a university from all different disciplines, especially professors who were willing to look at new ways of learning and teaching and trying to put those into practice into a special program.

And so it was an all university program initially. It wasn't housed in any one department or any one college. And we opened it up to educators primarily and began the integrative studies program. And it was magical from the beginning because we got permission from the administration not to give letter grades but to do narrative assessments. We focused on actually creating large workshops and experiential time periods, primarily on Saturdays where we could spend almost an entire day exploring concepts and ideas and depth and actually creating almost workshops around them.

We were very facilitative and we learned from the students and continually. And so we had a cohort that we would work with for over a period of two years. And in the first 10 cohorts, we had six teachers of a year come out of that. So we knew that these ideas were not just alternatives. They were actually working in a conventional way, even though it sounded like it was quite different and quite unusual. Our students found ways to implement them naturally in their classroom settings.

Let me go back to something you said before about your interest in work on system thinking. But not from this, I would say, not from a hard science approach. As I understand, you're looking at how to bring the whole notion and idea of system thinking to education. Can you share with us how you envisioned it? How you started working with that? How really system thinking can be taken to education, to an education setting?

Yes, this was...

It came out of my research so initially I was rather steeped in the theory of systems. And I started making distinctions pretty early on between closed systems and open systems. Closed being more mechanical, open systems being more organic and adaptive. So what would happen, the first notion of systems thinking is this broad sense of connectivity, of interconnection, of relatedness. And once you start thinking in those terms, it begins to shift the direction that you want to apply things. For example, if I have a content, fat, it isn't just a fat that there's photosynthesis, for example.

And it isn't just a concept and a definition of what photosynthesis is. It's how does it relate to something larger? So photosynthesis happens with the connection with the sun and the plants and the chemical processes that take place. It happens with the network of veins and ways that trees and the plants process the sunlight and change it and transform it and

use it. And so it begins to connect not only to trees, but they give oxygen to us and it fills our atmosphere with life-breathing oxygen.

And we in turn are giving off carbon dioxide and feeding the breath of trees. So there's a symbiotic relationship immediately and that relationship extends outward to other places. And so there's this sense of relationship in systems that is the target of attention rather than just the idea or the concept or the fact. And so that's what immediately changes. It's where is your attention? Is your attention on the fat? It doesn't ignore the fat, but the attention is where the fact takes you, where that concept and idea relates to other things and to your own life and to our own thinking and our own participation in the world.

And when that happens, there's a vitality. There's kind of an excitement that comes because we are relating to the information because we are part of that system. And that's what becomes engaging and exciting and challenging all at the same time. I don't know. I hope I wasn't too abstract there. No, that's fine. That's perfect. Thank you so much. It certainly clarifies because it's so important to see how these elements of system thinking really find a place in educational settings. Yes, it does, Mirian.

And of course, my example was just in terms of content, but then you have the classroom itself. You have groups of students interacting and collaborating and that system. And you have an openness then to their questions and then where do those questions take you? And what new ideas and interests can you absorb and begin to create? And then with systems, there's also a notion of boundary. It can't go everywhere because that would diffuse the energy. So there's a boundary situation. So how do teachers create boundaries within this interactive dynamic process?

So it goes at so many levels and in so many directions. And then the organization of the school, how do teachers connect with one another? And so all of this was being experimented, I guess, and explored in our work with Dry Creek Elementary and in the work of how we learn based on the brain research at the time. Yes, this is wonderful. So Sam, let's take a look at your book. The book you published in 1998, you co-authored the book with Renata in Geoffrey King. Yes. *The Reenchantment of Learning*.

Can you give us a gist of what is that book all about? The key ideas. Yes, yes. It actually stemmed from the work at the school. And we found that achievement levels soared very quickly. But we also found that not every teacher was as successful as others. Everybody was successful to a degree. But some of the teachers just took this and ran with it in a way that we really couldn't understand. And their students were sometimes two and three grade levels ahead of other classrooms. It was quite amazing.

And so we were trying to understand what in the world is happening here? What is it that creates these differentiations? Because they're studying the same thing. They say, yes, these ideas work. And they're working for everyone. But for some, they're working at a much higher level. So we started looking and seeing that the mindsets of teachers tended to be the key. And we divided those arbitrarily into three orientations, the way they saw the world. And some still held on to this content from the perspective of teacher control and teacher directed learning.

Others were more facilitative. And it was still teacher directed, but they were facilitating in a larger way. And they felt very comfortable moving from the directed learning into facilitated learning. And then still others were incredibly open to exploring content and things from the point of view of the students themselves and their interest. And they were still able to facilitate and they were still able to teach or direct. But those who were holding on to perceptions of teaching as teacher directed learning, they weren't able to move easily into facilitative and they certainly couldn't move into student interest.

They just couldn't make those shifts because their perceptions were locked in. And so we started looking and realizing that it was the perceptions and the assumptions that teachers held that really created the ability to move methodologically. And educationally in these more alternative directions, I guess you might say. I suppose that happens everywhere, from kindergarten, primary schools, mid schools and higher education. Either from the teacher side, from the students or even the parents that have assumptions and believes of what's the role of the teacher inside the classroom.

Is it control or is it letting it go? Yes, that's exactly right. And by that time we had actually worked with several other schools and we were finding very similar kinds of results. So this book, *Reenchantment*, was saying what does this orientation three, as we were calling it, what does it look like and feel like? What's the basis behind it all so that teachers could make this extra leap into this way of thinking? And then apply it in very practical ways in their classroom. So that's where the book came from.

And at the time there was a book called *The Reenchantment of the World* by Morris Berman. That was a rather beautiful intellectual history. There was also a book by Susie Gabelick, *The Reenchantment of Art*, that was looking at these very same ideas in the content and field of arts. And there was also a book, Julie Cameron's book, *The Artist's Way*, that was published during that time. And it was just, these things were coming together and this notion of reenchantment was that how do we connect to the natural world, to this organic view of life that was so prevalent and so magical in the early part of human experience?

How can we reenchant ourselves and be these kinds of agents in the world that connect and relate in very special ways? So that's the reenchantment. I love the title of the book, *The Reenchantment of Learning*. It's really very inspiring. So in that book, you talk about expanding our cognitive horizon. Yes. What did you mean by that, expanding our cognitive horizon? Well, a horizon generally represents a limit. In other words, as you look out into and it spans to the ocean, our perception, it ends there.

The ocean doesn't end, but our perception does. And so the more we can expand our horizon, we can see farther into the distance. And so that's kind of a notion of horizon. And when you apply that to cognition, we find that we actually have, we limit what we think we're capable of. We limit what we think we can learn. And we limit our students' experience. So that's if we can expand those, we can move them out and not just focus on facts and not just focus on small ideas, but see the relationship of these ideas to ourselves and our action in the world and to these larger relationships that can inform our thinking and our being, then that's what cognitive horizon means, actually, for us.

And so in that chapter, we basically said, OK, we usually start with facts, you know, and a lot of school is learning facts and learning information. But to expand that cognitive horizon, we said, well, where do these facts come from? Where do they lead to? How are they developed? And so once you move from a fact to an idea, it's like ideas like interstate highways. Out to peace, in other words, they carry you forward in a way that a small local road can't do. And so facts are like those small roads.

It's not that they're unimportant, but an interstate highway can carry you farther and faster into the world of concepts and facts and relationships. Well, thank you so much. I hope all of us will be re-enchanting the process of learning and dedicating and hopefully take this book as an inspiration to that. Then you moved to a book called Emergent Teaching. In 2013, you co-authored a book called Emergent Teaching, A Path of Creativity, Significance and Transformation. Would you share with us the key ideas that are articulated in that book?

And also maybe what inspired you to write this book? Again, it seems like a lot of my books and a lot most of my writing comes from the act of teaching. And so my students teach me and I love to collaborate in teaching and in that collaborative process, the conversations that I create with that I'm a part of with other educators, we just explore ideas together. So this book came out of the experience with our master's students in holistic and integrative learning. And I created a course on the arts specifically and asked a dear friend of mine, David Readmar, who is an art teacher at a very esteemed art school, Ida Wilde Arts Academy.

And he's the chair of the visual arts department and worked with David Hockney and others at the Royal Academy of Art in London. And so we started co-teaching together and we developed a course called Art in Nature. And during that, we would work in the wilderness and David would create amazing experiences integrating art and nature with our students. And I would help process this and look as we looked at holistic understandings, systems, thinking, planetary survival and planetary understandings of the earth and so forth.

So out of that collaboration, we began conversing about education and learning and art and philosophy and spirit, all of these things. David is also a Zen monk and so we had wonderful conversations around this and developed the book, Emergent Thinking, Emergent Teaching, I'm sorry, that describes these stories of our teaching in relation to the science of emergence and open systems.

Yeah, but can you help us understand what is emergent teaching? What does it mean? I will try to do so. And one of the things that happens, emergence, the concept of emergence actually comes out of chaos theory and complexity theory, and which is very abstract and it's embedded in mathematics. And but it is essentially where it's information from the bottom up. Usually we think of information as top down in the systems, but this is where information comes from the bottom and informs the larger system. Ant colonies, slime molds are all examples of emergence. There's great order in it, but if you're looking at things, it seems very chaotic and disorganized at first.

And so how we communicate and how we take information from students and and collectivize it so that everybody benefits from everyone else's information, that's kind of a model, a particular model of emergence applied to learning. And we started realizing that what emerges, emergence is the way nature creates itself. And so it's tied to creativity.

It is the way a system self-organizes, where you have maybe an example would be if we were to create a group process where we're working together on a project. We have to come up as a group on what our project's going to be, what are we going to, what will we do, what will we, who's going to do what. The very beginnings of that conversation is all over, is everywhere, excuse me. And one person is giving another idea and another idea. So it seems very chaotic. But then it starts to pull itself together.

It starts to have some dimensions to it. And then after about 20 or 25 minutes, this conversation becomes very focused. And something has emerged out of this random, seemingly random, it's not really, but this activity of conversation and dialogue and chaos that seems workable. And here we are. So now all four or five of us in the group are working toward the same thing. And we're working at different ways and bringing our expertise and our interests and our questions and our skills all to bear on it. And so something new then begins to be created that wasn't predictable when, before anything started, all that we knew was a boundary situation. So that is an example of emergence. And we started to explore the conditions that create emergent possibilities.

And we looked at process, non-linearity, creative impulses, and all sorts of things that can be put into place to help emergence actually find a way to create itself. And we can see some ideas of system thinking also embedded in that concept. It's completely, yes, it's completely embedded in it because emergence is a part of systems thinking. And as systems relate and connect things, how do systems create themselves? How do they adapt to new situations? And so that becomes a question. Emergence is part of systems thinking, especially complex systems, especially adaptive systems that are all always taking in new information and then what do we do with this new information? How does it affect us? You have a chapter in that book that's called Teaching What Really Matters. What do you mean by that?

That actually is an introduction to transformation, to the notion of transformation.

And I should say that emergence itself is a transformative process. And so it's natural to, transformation is natural to emergent systems. And so in the world, teaching what really matters is a bit of a deeper exploration of transformation itself. In that chapter, we start to kind of look at learning and knowing is not enough in itself. Learning facts and learning content, it's good, there's nothing wrong with that. But the question is, where does it take you? How does it, how does an individual or a classroom process that information? What do you do with the information once it becomes part of you? And how do you take that information into the world?

And so if you're looking at what you take into the world, what really matters? So I think this is the question, isn't just that we're learning something, but what is it that we're learning? And so what are we learning? What are we going to do with it? Right? What are we going to do with that? And that's, that was one of the evolutionary aspects of my

own teaching. When we had the cohorts and the holistic and integrative program, it wasn't just seeing that the world is interconnected and systemic and whole. It says, which, what do we do with this knowledge? And that's when I actually discovered the Earth Charter. And the Earth Charter became a revelation here, here is, here, here are principles and ideas and values that, that make a difference in the world.

So how could these be integrated into our understandings of education and to who we are? And I planned several trips and students to Costa Rica, to the Earth Charter center, to various foundations. We started looking at peace education, at sustainability, and ways that these were ideas and concepts and themes that matter, that make a difference. And so, but in your, in your, in your experience, your own experience, how do you really make it happen to teach what matters for students?

Oh, I have to pause just a minute to think about that. I think, I think part of what matters is searching your own inner world to see what matters to you.

Where the word enthusiasm comes from the Greek, and theos, the God within. So there's something that begins to come forth when we experience delight in subject matter or an idea. And, and education, as we look at it, has become quite sterile. So what is it that brings education to life? What brings our knowing to life? And it's almost always when we're able to provide benefit to others in the world, in our experience, whether it's one on one, whether it's one to a small group, or whether it's to a community, community seems to bind and bond our understanding of what's important, and what really matters. So it's looking at what matters to us, what feeds our soul, what, what invigorates us, what breeds life into our experience.

But it's also how can I inspire and take this into the world to make it a better place. And, yeah, this is wonderful. And I would like to ask you to share with us your thinking on transformative learning. What is that? And how, how can transformative learning take place in a, in a levification setting?

Okay. Again, a very big topic. But, and there have been some wonderful, some wonderful work in, in the ideas around transform, transformative learning. I'm going to make some comments built around the concept of emergence, probably. For that's where I think about transformation myself, and, and have some experience with it. So let me, let me first of all talk about transformation as process, because I realized once that sometimes transformation elicits the, the notion of change. And for a long time, I wanted to, okay, as a teacher, as a professor, I want to change the ideas that my students come up with. And the more I thought about that, the more I started being uncomfortable with it. Who am I to change anyone?

And so I started to, to, to shift that perception a little bit for myself, rather than trying to change my students, I wanted to touch their lives in a positive way. And if I can touch their lives with my ideas, with new ideas, with experiences, with understandings, then change will happen as they want it to happen, and as they need it to happen in their lives. And from there, I started realizing that, that any kind of transformation is always dynamic. It's always moving. It's always processing itself inside of our lives. And in terms of our experience. So process is an event. It's, it isn't just the notion of teaching a set of processes.

It's, it isn't just a thing of processing in terms of reflecting. Process is ongoing. It's movement. It's dynamism.

And it's, it's an, it's a, an integral element of what systems really are. They're always processing in new information, new experience, new aspects of the environment, and, and interacting with that, being changed by it, and also changing the environment itself. So this interaction is always happening. And if we apply that to learning, then learning is always an event. It's always an experience. It's always taking in from our environment and contributing to the environment at the same time. So learning is event centric.

And this is something that David and I started to realize and talk about a lot. As we saw it happen with our students, we would create these events that held possibility. And the students would doubt in a very dynamic way, the events. They would, in other words, they would create a labyrinth of, given certain restrictive conditions, or they would create a mandala in nature, given certain rule structures. And each time it was done, it was done differently with a whole set of interactions. And they would create their own process for bringing something into being. And then we would process reflectively what that experience was. And as we processed layer upon layer upon layer, we could delve very deeply into content, facts, information. So our information and our teaching came after the process, actually.

I hope this is, this is very helpful. If you, you share some of these ideas in your book, Emergent Teaching. Yes, it is. And so process and labyrinth and mandala.

Yes, those are all stories that we share and try to learn from. And to help teachers facilitate process in this way, we started to identify some, some things that that were natural to trans, trans to getting into the center of transformation, occupying that space where something happens and moves and is dynamic. And the first of those is participation. Students are invited to participate and interact. And as soon as you open up interactive space, there is a creative element that comes with that. And that could be between two people, three people, four people, multiple people. And so, but so teachers, if you want to start on a, a transformative notion, create participation. And you can do it in very subtle ways. You can do it in conventional settings or unconventional settings.

A second thing that goes along with participation is engagement. It's a more complex form because now it incorporates a, a problem-based or project-based assignment. And so, and this assignment needs to happen over time. And it could be, this could even be individual. One of David's assignments was to have his students go out into a forested area near the campus and create sculptural forms out of the materials, the natural materials that were lying around. And so, they would create sculptures. And these would be in different places. And he asked them to visit this, their sculptures once a month from the beginning of school to the end of school, an entire year. And not to change it, but to record the changes, record the things. So, this is an engagement.

Students started going there and taking pictures or making drawings or writing notes and creating poetry. And they started going sometimes weekly or sometimes multiple times a week, some of them, because they, they needed a space. It became a refuge for them. And so, all of this work was completely on their own. And they were, they were engaged in it.

The third element that we noticed was choice. It's a key to facilitating process because now these students who were visiting their sculptures had choice. They could decide how they wanted to record the differences. And sometimes they would do it in multiple ways. And that choice made, made an important distinction because now they could take ideas. They, the way they spent their time, sometimes they would be processing new artwork.

Sometimes they would be crying. Sometimes it would be an emotional event that needed resolving in their lives. So, these choices, they had choices in this space. And it happened over time. And so, finally, when they brought this together at the end of the year, they, they wrote it up and presented their, their, their recollections and their observations in very creative ways. They had to create some kind of, of final way to communicate to the other students what their sculpture was, how it had changed, and the nature of their experience. And it was beautiful. Yeah, it's wonderful. You gave them ownership of the process, right? Yes, they had ownership of the process themselves. And yet there were, there were rules structures. They were loosely bound rules.

And so, once, once students participate and are engaged and have choice, and, and then they, they, they have a, a community in which to share this, it becomes magical. Okay, wonderful. Sam, so you, it seems that you, you already shared some of how you relate emergent teaching to transformative learning.

But would, is there anything else that you would like to share in terms of, because I would like you to bring the notion of education for sustainability? And how do you relate transformative learning, emergent teaching with education for sustainability? Okay. It, it occurs to me that I talked about transformation, mostly in terms of, of movement and activity and, and content. One of the things that I did not discuss that's so important is that this kind of learning transforms the individual. It shifts something inside of, of us. It shifts the perspective. It, it, it puts us in touch with what's, what's very significant and important in our lives. We identify with the experience. And this final notion of transformation is, is, is life can be life changing.

And a lot of our students say this, this experience changed my life. And we're not looking for that. It's just that it occurs when we're deeply affected by the nature of our experience. And our students are something shifts inside of them. They're different. They see the world differently and they take this.

So transfer, this kind of teaching is almost a sacred art, if you'll allow me to use that term.

Sacred means inspiring awe and wonder. And I think, I think this is the, the essence of transformational learning when somehow we are put in touch with the awe and wonder of this world, of this planet, of this universe and of our role in it. It's so special. And it's, to me, it's, it's what feeds me as a teacher. And it's what I hope for a dream about. So, so in terms of sustainability,

I actually think sustainability should be the focus of all of our educational endeavors, content-wise. Because sustainability covers such, it's a broad, it's a large horizon for us.

It's right there. There's so many life-changing concepts about it and values that can inform our lives. And I think the Earth Charter pulls so many of those together for me anyway. And for my students, they found it, whoa, it's right here. So, Sam, how did the, how did the Earth Charter inform your thinking when you came across? How did it expand or inform your thinking? And how have you used the Earth Charter in your teaching? Well, as, as an educator, I had been, I had been steeped as a, as an academic in critical theory and beautiful work of Paolo Freire and others bringing conscientization of the world, of looking at power structures and inequities and seeing education from that perspective, not just education, but many other things.

And so, a lot of what we do in education as academics anyway, is we do critically examine the assumptions and the conditions of the world and how education plays a role in the inequities, how education can actually play a role in, in the construction of a social reality that's, that's harmful to this planet. And so, in many, many different ways and aspects. So, as an educator, I had, I had understood these things as a critical theorist, but there was an element where, yes, you can, you can critically examine these, these things, but it doesn't take you anywhere. Where do you go from that critical examination? Where do you go from the identification that we're complicit to the inequities and the injustices of this world as educators even?

And when I came across the Earth Charter, it was, this is where we take it. It was, here it is. It acknowledges that, that we've, that education and, and not just education, but our social institutions are complicit in creating injustices in our world and our society. We're complicit in the ways that we, our materialism harms the planet.

We're complicit in the ways that we perpetuate injustice and inequity. And we're complicit in the way that our assumptions create distance and separation and violence in the world. So, how can we, what values can change this? And so, when the Earth Charter recognizes diversity and respect and care, those are huge values to counterbalance and help us look through and within these injustices. When we look at care and, and, and responsibility for the integrity of our environment and creating a world for generations to come that's going to be both beautiful and bountiful, then the Earth Charter addresses that.

When we look at poverty and injustice, when we look at the role of, of girls and, and, or the lack of participation of girls and, and women in the world, we see these injustices, we see economic inequities, and how can we make it better? How can we begin to tap into this sense of fairness, this sense of, of connection and relatedness that doesn't allow these injustices to exist or at least exist in a complicit way? So, do you share, do you share the Earth Charter with your students in asking to, to, what do they do? They, they discuss about this or?

They discuss them and we began to discuss them in groups and, and I first had them read them when I encountered, encountered the Earth Charter and to, and then we would have discussions about it. And I realized that this approach became academic. It was, it was useful and they liked it and, and they benefited, I think, from it, but it was still academic. What began to change is how can we incorporate this into our own community of learners? Now that, it took on a different role then. How can we show respect and care to one another?

How we, when things that we would learn, for instance, I, I brought in a, we were meeting an all day Saturday and I brought in an oven and we, we started the day by making bread and, and we had, we made loaves and loaves of bread during the day as we, as we had regular content and then what can we do with the bread? And so we decided to go to, to shelters and to people who, who did not have food and to give this. It became, in other words, these things became part of our, the culture of our community and, and we started applying them. Then it was the conversations, how can we apply these in a classroom? Where can we go with these?

And so I asked them to develop units to look at, at particular principles that spoke to their hearts, not just their heads, but what, what resonated deeply with them and why and, and then what could be, what resonated and connected to the curriculum? Some were high school teachers, some were English teachers, some were Spanish teachers, some were kindergarten teachers. So, so what connected to their, their students age groups, their interests, their needs and so forth and they began developing units.

And so just to clarify, these were students or graduate students. These are graduate students. Yes, they're graduate students and, and teachers and most of them were teachers, not all and, but so they took it into the world and that's, and so we took it first into our community and made it part of our culture and then we took it, we deeply processed it internally as an individual and then they created units for their students and with their students and that would be two, three and four week units. Yeah, it's wonderful. So Sam, we are almost coming to an end of our conversation today, but I still have two questions that I would like you to, to share with us, your thoughts.

The first one is how do you envision education in the future or how do we, what's your wish, your aspiration for education of the future to be?

Oh boy. I, I think one, I see education as being founded on a theme of, of planetary sustainability and I, I really think that if education were organized with that larger purpose in mind that, that the content that we currently have, the subject matter, I should say, the subject matter, the discipline fields, they would begin to switch. We live in a world where these disciplines are not isolated or separate. They're integrated with each other and so the disciplinary knowledge is still going to be there, but the purpose, the foundation, the assumptions of planetary consciousness and planetary sustainability, I think could organize the information in a very different and purposeful and meaningful way.

So that being a content thought, a thematic thought, but I think education is, has two aspects to it and we, we focus a lot on learning, learning, learning, but in the role of sustainability and planetary consciousness and systems thinking, there's so many things that we need to unlearn.

So what are the, what are the things that need to be unlearned in our lives and in our world and in our society and then what contrasting to that, what needs to be learned and to me these go together, the unlearning and the learning, the letting go of, of certain assumptions that have not been useful to, to us as a society for a lot of years now, letting go of this idea of separation and learning what it means to be connected and relational, letting go of excessive individualism and learning what it means to, to live and be for the benefit of

others, letting go and unlearning the things, the way we operate on the basis of fear and, and, and ego and learning what it means to operate on the basis of love and care and loving kindness and compassion.

Learning, unlearning that human beings are, are, are not the end all and be all of, of, of this planet and learning that, that we live in a, in a world of multiple communities of life. And so this unlearning and learning need to go together. And then finally, that there's this notion of ontological learning. What do we, what do we, how do we learn in ways that, that go to the deepest part of our own hearts? I guess you might call it heart-centered learning where we, we are connected to what we take delight in, in terms of, of, of who we are, that each one of us, we are a gift to the world. So what kind of gift will our lives make to this world? And so all education is the education of who we are and what we do with what we know and, and the lives that we live.

So, so that to me is the modes of learning are going to change. They're going to be more and more technical and technological. But participation in the world, the embodiment of these things, of these ideas within our experience, that's not going to change. That's wonderful. Thank you so much. And thank you. You're, you're thinking around education has evolved quite a lot, I suppose, in the past 30 years or so.

So since the beginning, no, your, your books on mind shifts and then your, your writings on re-enchantment of learning, emergent teaching, transformative learning, now with the Earth Charter education, what's, what really do you think has really changed your own thinking, in your mind, in terms of how you approach education? What were the key changes over the past 30 years?

Well, there's certainly been a common thread as I go back and, and read things I've written over the last 30 years, there's a common thread that holds together, which in some ways is comforting, in other ways, maybe not so. But there's certainly been an evolution. And the evolution, I think, has been more from an analytical understanding, kind of an abstract delight in some of these ideas, is saying, how can I live these out? And I think that question has kind of guided me. How can I bring these ideas to life? And it isn't with just new ways to explain ideas. It is exploring ideas in terms of embodied action. And I guess I've been looking for physical metaphors. How can I experience the ideas in the world, in life? And I love, I just love making those opportunities available to students.

Because when they can experience the ideas, then you can just see the, ah ha, come right on.

You can see, when they start to discuss them on themselves, how they just explode in terms of the relationships they see to their work and to their lives and to the world. So I think that's where the biggest changes have come, to use every opportunity as an opportunity to experience these ideas. And ultimately, to be some kind of manifestation of love. And I think we've not brought that turn into an educational conversation because we're afraid of it. But when we think about love and care and loving kindness, it relates to the human experience in a way absolutely nothing else can.

So my work as an educator is now, I think, a work of love. I try to see it that way. And that's what's changed most deeply and most profoundly for me. Yeah. Well, that's

wonderful, wonderful to hear you. Thank you so much, Sam. Thank you. We had the pleasure of hearing you with so much wisdom and experience over so many years in the field of education. Thank you so much, Sam, for your help in extending our thinking on all these important matters. And let's make learning really transformative and re-enchanting.

Thank you, Mirian. And it's been a delight for me. Thanks.

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