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What are the challenges of the academic world?

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Well, first of all, it's always very difficult to try to think of what will happen in 20 years, right? But I think most of the people in the academic world may agree in some different ideas I would like to highlight. The first idea would be around what I call, let's say, hybrid universities. Meaning, 10 years ago, there was mainly physical, presential universities, and then online universities giving non-presential degrees, titles, et cetera. And probably because of the pandemics, because of everything around the internet, the networks, etc. More and more, the online universities are trying to have contact physically with their students and the presential universities are really incorporating to their portfolio non-physical, non-presential teaching activities, online courses, etc. Probably in 20 years from now, I guess there won't be online or residential universities, there will be more hybrid universities using all the possible techniques, even considering what would happen with what we can call immersive technologies or virtual reality or whatever. If we really can put sunglasses provided by, I don't know, if Apple or anybody else, and we can feel inside the classroom, really looking to all the colleagues with a really high resolution, with a good immersive feeling, I think this can be a really game changer for most of the university. On the terms of the methodologies,

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I think today we are really looking at

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some big changes in how we teach a class. So I'm professor of mathematics for engineers, for instance, and the fact is that everything I teach to my students, being entirely honest, are in the books. I cannot explain anything that are not in a book, and most of the things I explain, in fact, were already in the books 200 years ago, because I explain algebra and calculus and things that were invented, let's say, in this way after Nixon, right? So what's my added value for the class, for the students? This is the right question. I think my added value is not just going to the board and explaining all the demonstration about the theorems as I've been doing for the last 20, 25 years in class. I think the real added value is being able to flip the class, to give to them previously the contents and then being able to analyse, to discuss, to plan new type of activities. It's not only a matter of the fact that everything I explain is in the books. It's also a matter that on the internet there are full of videos of people explaining the same thing I have to explain to my students. And most of those people are, they know more than me how to explain something in a wide audience. So there are probably funniest videos with a lot of animation, with a lot of things there. So for me as professor, it's more a matter of giving the materials to the students, encouraging them to

follow these materials, to get all this knowledge, and then playing a role more on the side of, you know, discussing the things, planning new activities, putting some key questions there on the table to discuss. So I guess that the learning methodologies will be more on the field of the discussion together, students and professors that are having a topic around previous knowledge than going back to some years ago with the professors on the white board and the black board explaining whatever we explained before. There's also another thing about that. I still believe that this physical discussion between the students and the professor of Scorva, mainly between the students, is something of a big added value for them on the learning process. So, even considering that the future technologies will allow students to discuss among themselves about something, this will be still necessary. So, I'm a bit skeptical about this idea of having a lot of students at home learning individually from some type of materials or virtual professors. Probably I still believe on the value of the academic discussion to make progress on the knowledge and to understand better things. So maybe physically speaking or maybe at home there will still be necessary these environments to discuss, to share, to comment on some different things. And last but not least, I can imagine a few years from now, some systems for the students in order to have a Q&A procedure, a chat with some virtual professor, just to check all the doubts, all the questions that can arise in the learning process. So today if I'm a student of engineering, I'm at home, I'm a student basic algebra with my book, probably I will have some doubts. I can go to the internet and try to find this book or this video that explains how to multiply two matrices that have certain characteristics, but in the near future it will be easier. There will be something I would be able to ask my question, I will get the precise answer to that, and even I should be able to share this with my colleagues. So So probably in the future, we'll be something like a mixture between, let's say, digital assistance for learning. Also, with physical discussion in class and online or digital environment, and also having professors that will do far more than just explaining something on the board, but giving the contents and then being able to plan new questions, discuss with the students and to offer really encouraging to go further on the knowledge. and to offer really encouraging to go further on the knowledge. I think I can imagine things like that for the next 20 years.