How these 5 teachers reinvented themselves to teach online



When they received the news that **face-to-face classes** would be suspended in Mexico, these **teachers** began to plan how they would **continue their lessons**.

Five teachers who had to reinvent their classes due to the **quarantine** caused by the global COVID-19 pandemic told **CONECTA** how they did it.

Some of these professors have been **recognized** by Tec leaders such as Rector David Garza for their **creativity** in reinventing themselves.

ILIANA RODRÍGUEZ SANTIBÁÑEZ

Iliana is a teacher in the Law Department at the Mexico City campus and has been recognized as one of the most influential lawyers in Mexico by Foro Jurídico magazine.



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Within the online class format, Iliana structures her class into **blocks**, beginning by **welcoming** and asking about her students.

After this, she uses **tools** like Kahoot! with questions that measure how much progress **student** have made, followed by the theoretical part and promoting interaction in the group.

"Sometimes I also play a **short video** for them depending on the relevance and we work in teams through Zoom. Something important for my class is to bring in an **expert guest** on a subject," she said.

Her guests have included directors, experts on legal cases, and even a **former consul** from the US city of Seattle.

https://twitter.com/ilrodrig/status/1252808316192948224

"I don't improvise. **I plan my classes.** When the 2017 earthquake happened in Mexico City, we had to reinvent ourselves as well.

"Now, with the arrival of the **pandemic**, we've been forced to dust off what we'd already learned," said Iliana.

In addition to her classes, Iliana participates in **webinar** sessions on various **legal topics** with experts from Latin America aimed at colleagues, students, and graduates of related degrees.

Sergio is a professor of Strategy and Leadership at the Aguascalientes campus.



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He teaches strategic sustainability and planning, communication and ideation, and prototyping.

One of the main **challenges** that the pandemic brought to his classes was that of **contact** with the **companies** that his students worked with to solve challenges.

"We spoke with a **car manufacturer** in Aguascalientes. At the beginning, they didn't listen to us, but fortunately we met over Zoom and they allowed us to **continue the project**," Sánchez said.



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Traditionally, the students would **visit** the plant as part of these projects. Now, they work with **observation exercises shared** between the students and the members of the company.

"Our students were analyzing small parts; instead of a **visit**, they worked on this project **in parts** and it worked," he added.

Sergio says they had to reinvent the **prototyping** classes in the same way, where his **students** now have to make **sketches** and use simple materials that they have at home to do the practical side.

"The **students** are very **creative**; they all had the same background during the video calls, and they made videos of a client's process through video calls.

"Our classes at the moment exist for both **relief** and **focus**. Sometimes, it's the **only interaction** that allows our students to vent," he added.

GERARDO TOBÍAS

Gerardo teaches the **Financial Management** block of the **Tec21 Model** and this is the second time he has taught this course:

Once in the **classroom** the previous semester and **online** this year.



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One of the characteristics of these courses is that **learning** occurs by **solving real-world challenges**, so the quarantine presented an opportunity.

"Instead of me explaining a **method** such as pricing a product, I ask them how they would do it, and we construct that method through their **contributions**," Tobias said.

When the price of **oil** fell, Gerardo remembers that he chose not to use the example he had prepared and **worked on that story** to explain the issue of inventories and costs.

"We asked them if they knew how much storage capacity Mexico has for oil; as it does not have so much, they cannot keep it and that makes the price drop because they need to sell it," he said.



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What's more, when he used these **techniques**, Tobias recalled that there were **sessions** that ended a little **later** than usual.

That's because the **students** continued **participating** when they were interested in a current, real, and visible topic about their environment.

"In the teachers' evaluation, the students told us they really liked that we made the **news** of the day part of the **material** used in the **classes**," he said.

MIGUEL XICOTÉNCATL RODRÍGUEZ

Miguel is a professor at the **School of Engineering and Sciences** on **Puebla campus** and has run a YouTube channel since 2009 with **more than 500 videos** on topics related to architecture and civil engineering.



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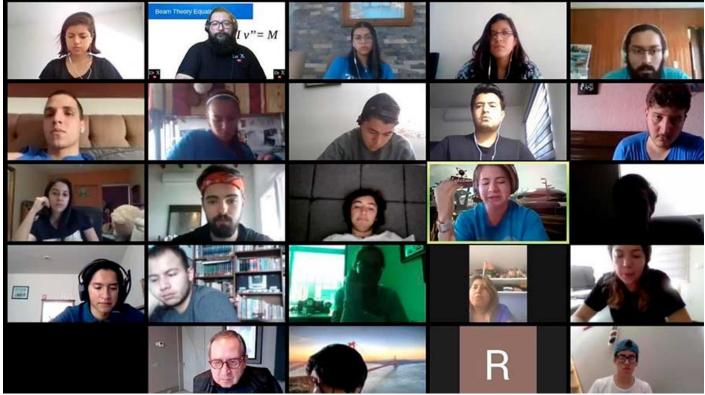
During this quarantine, Miguel has used the **videos** from his channel as **support material** for his students, with whom he also holds video calls for team activities and group sessions.

"I don't like holding video calls with the students all the time. What I do is prepare material with videos.

"I make playlists with various videos. They watch them before class and then we discuss them and do team activities," said Miguel.

In the same way, Miguel takes advantage of **architecture reports and series** that he and the students discuss live, so that they can complete activities in pairs or teams.

Documentaries like National Geographic's *"Megastructures"* are an example of the supporting material that this teacher uses.



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"I also believe that having an **open channel of communication** is important. I use Facebook to make groups for each subject so that students can do things like send messages and ask for advice," said Miguel.

In addition to that, Miguel records **tips** for **teachers** which he uploads to his channel so as to collaborate with colleagues from other campuses and regions.

"It's also important to **feel how the group is doing**. Sometimes you have to improvise. If something happened during the day, you use it for the class. If there was an earthquake, you talk about structures and terrain," he added.

DIANA URQUIZA

Diana is the director of the **Music Production Engineering** degree program and her **postproduction and digital mastering** classes are mostly held in specialized audio laboratories.



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"At first, it was difficult. 80% of the sessions are practical and having a student in front of a computer wasn't an option," she said.

When they are in a face-to-face format, students **play and listen** at the same time, both to themselves and to their classmates and teachers, so taking these classes on the Internet would be difficult.



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The challenge was to make the students' **sound systems** sound good on the other end of the line.

"The problem was **Internet latency**, which varies speed. There were seconds of delay and there can be no delay in these classes," she said.

To solve this, she began looking for **software** to synchronize her student's audio during the **video calls** over Zoom and together with other teachers began to give advice on how to use it.

They used some **plugins** and **software** that certain companies had provided for free due to the quarantine.

With these, the audio is not compressed and so this allows for better sound during video calls.

Diana mentions that **this format** can give them **experience** of the work that some producers around the world are having to do during the emergency.

"That's the way it is in the **world of work**. You present your work to your clients and you have to make it sound good. You have to set up your equipment well. **It's a challenge**," she pointed out.

Similarly, Diana holds some **mentoring sessions** through **video calls** to support colleagues and students inside and outside of the Tec.

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