'Teacher of the Year' Konstantinos Efstathiou

by Mónica Espinoza Cangahuala

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Konstantinos Efstathiou was voted 'Teacher of the Year' in chemical engineering. He competed against two other nominees Jun Yue, and Geert F. Versteeg for the title in chemical engineering. In honor of this achievement we chatted with him to learn a bit more about him and his thoughts on teaching in higher education.

Background

Konstantinos was born in Greece and studied physics in Athens. He did his bachelor in physics and his master in astrophysics, which involved astronomy and classical mechanics. 'But mostly I was in the mechanics parts, mechanics as in classical mechanics'. After his masters he went to France to obtain his Ph.D. in physics. Of this time he says, I had two supervisors, they were both theoretical chemists, they were in spectroscopy, a quite theoretical point of view at that. This is where I started working in the research I'm doing now.' After completing his Ph.D. he came to Groningen as a postdoctoral researcher for about 7 years. Then he ventured to China for about one and a half years. And he is back in Groningen since April 2014.

Teaching experience

Konstantinos has a varied background when it comes to learning how to teach in higher education. He followed the mandatory teaching courses after he came to Groningen to be an assistant professor. Before that he followed a general pedagogic course in Athens back when he was a bachelor student of physics. In China he also followed teaching courses, 'It was actually part of the training there to get these kind of courses'. The branch in China offered a long program on teaching in higher education but he only stayed for one year so he didn't complete all the courses. 'I did half of them and it was quite extensive. But it didn't focus a lot on how to teach large groups. It focused a lot on how to teach small groups and organize small groups. Also, it focused on things like value assessment and about different types of assessment, not just exams'. He taught a lot of courses during his postdoc in Groningen. So before coming back to Groningen he had about 7 years of teaching experience behind his belt. He keeps current on the topic of teaching in higher education by self-learning, 'I have read a lot of books about it myself'.

Chemists versus mathematicians

Now back in Groningen he only teaches mathematics students and chemistry students. Chemistry students do seem to require a different approach, 'In the beginning I didn't do things differently. Eventually I changed, because I found out it was not very productive to teach the same way. What I am trying to do more in calculus for chemistry, especially in the last years is to emphasize more on the possible applications of calculus in chemistry. Because I had the feeling, and students also had the feeling it was kind of disconnected. They had the question: so why are we doing this kind of things? So this year I tried much harder to emphasize these questions and how they can be useful'.

Engaging students

Students can often be distracted during a lecture but he doesn't think this is a modern problem. And he is very understanding of this, 'I understand that if [students] are bored they can always check their phones, talk to friends etc. but I mean even before social media students tuned out of a lecture.'

He does use power point slides but he doesn't consider that a form of interaction, 'it's still part of the [classical] lecture'. Instead, he tries to engage students by posing problems and allowing students to hand in their answers by logging into a class response system website called Socrative. He thinks this is a very handy tool to gauge students understanding of core concepts, 'We can see during the course, how students answer, if students answer correctly or if we need to discuss something more.' But mostly to 'also break the monotony of the lecture, that's the most important thing actually'.

Mentors

When he first started his studies he was a bit disappointed about the courses and found them a bit boring, 'so I kind of tuned out' he says. But that soon changed, 'in the 2nd year of my studies there was this professor that was teaching classical mechanics. He gave a great lecture. He was very motivating and he obviously had a very deep understanding of what he was talking about'. This professor had a great influence on him, 'in the sense of now I'm doing classical mechanics. I mean that is not the only reason but that was a very important reason for re-engaging in my studies. After that I again found my studies very interesting. He was very crucial in changing my perception how things are. Before I found things boring and after following his lectures I found things can be very interesting.' In terms of teaching he is most inspired by the late Dutch professor and eminent mathematician Hans Duistermaat, 'he gave really beautiful lectures in his topic', he adds fondly. But he considers it a style best reserved for mathematics students, 'It's the kind of the style that appeals more to mathematicians rather than someone who is more applied and who wants to see applications'.

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Life long lesson

As to what he hopes students always remember? 'Well, I want them to remember how to do these assignments', he says with a snicker. Joking aside, he wants students to change their mindset about mathematics and realize that it's all about putting in the hours. 'I mean people have this impression that mathematics, in doing mathematics it means you're very clever, a genius or something like that. It's completely not true. Mathematics is something for which, you have to put the work, the hours, do the exercises.' He compares it to a relatable Dutch concept, 'I see it more like biking. You cannot learn how to bike

unless you actually go on a bike and start biking. No matter how many lectures, [it alone] can't teach you how to bike. And mathematics is the same. I can be there lecturing the whole time, but if students don't actually start doing things with like practicing themselves then they are never going to learn.'

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He is very modest about his success with this goal, '[it is] something that I try to convey to students but I'm not sure I'm very successful at'. He wants all his students to realize that, although it's clear that some students understand that sooner than others. He adds pensively, 'for me that's perhaps the most important thing for students to get. Even if students forget what I am teaching in terms of content after a few years they can still do a good type of studying based on practicing and thinking actively about what they are doing instead of just waiting for the lecturer to transmit information, which never works actually.' So it's not all about getting the right answers but about learning how to think in order to solve a problem.

Internationalization

Konstantinos thinks internationalization is 'a great idea', which doesn't seem so far fetched as he has quite an international career himself. He considers universities that focus on internationalization as rare environments that foster a richer learning experience, which is very important students including local students. He says quite enthusiastically, 'I have had this career because of the rare environments like this university that welcome foreigners. They welcome them, allow them to do their best work, and give them the tools to do their best work.' He sees it as a benefit for both the students and the university itself as it encourages excellence, 'from this point of view having international institutes is something that in some sense is self-serving. On the other hand I think it also allows local students to interact with students and professors from many other backgrounds.' The added value extends beyond quality teaching, '[it] makes their learning experience much richer. Not only in terms of knowledge but also of style, how things are taught, how people think.' He does understand that some students might prefer getting a higher education in their own mother tongue, 'I understand that sometimes people. Especially students from the Netherlands might perhaps prefer to learn things in their own language and that makes things more convenient for them.' However, he thinks the sacrifice is worthwhile, 'I think the fact that they are challenged to work in an international environment is something that is going to be good for their future career. And overall I think it is very positive aspect of this university and I think it's something that works quite well here in Groningen.'

Yantai branch

Konstantinos already has experience with higher education in China. 'I worked in a university that was a branch university, XJTLU. It was a joint branch between Xi'an Jiaotong and Liverpool University. It was not a typical Chinese institute. It was more like a typical British university in the way many of the things worked there.' He doesn't think there would be much of a problem when teaching a scientific field there such as mathematics, 'when I went there I did not see many problems. I was teaching mathematics so it's not something for which I expect to be any problem in say what I want to say in mathematics.' At most there could be practical issues having to do with the quality of the Internet connection from China to abroad. He adds, 'most of the websites abroad were [slow to load as] the connection was very slow. Some of them were completely blocked.' This could cause some trouble if teachers wanted to be more interactive, 'for example if I wanted to show my students a YouTube video about something, then that was not possible because there was no YouTube [access].' However, he is still optimistic this won't be much of an issue in the Yantai branch. 'Now, they say that for Yantai, this problem is not going to be there because they are going to have some dedicated connection to [Groningen]. So students and professors would have access to everything. I would be very happy if this works, and we are going to see if this really works well.' Access to all available information is definitely a must and should be guaranteed, 'to give both students and teacher access to all available knowledge. I mean there is a lot of knowledge in things like YouTube right now. I think it's really essential to access these [websites].'

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He is very happy on winning the title of 'Teacher of the Year' in chemical engineering even though he doesn't have his own cup. But there is always next year.