

Tales from an Agile Journey: Designing Curricula for Millennials in Industry and Academia

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Abstract— The traditional role of the teacher as holder of all wisdom has been put in question, at least in some circles, in the last few years. Changes brought on by Millennials, a new generation of students both eager to collaborate and restless, the ubiquitous overflow of information, the rise of agility, the proliferation of new teaching methodologies, and profound shifts in technology have generated alternatives and challenged us teachers to do our work differently. The theories behind these changes are decades old, but only with the convergence of these factors do we begin to see a shift in centuries old structures of teaching practice, both in industry and academia.

In this talk, I will share my experience and that of my peers in teaching and designing curricula in industry and academia, and how our own learnings from the agile community have influenced both content and form in the design of software engineering programs and courses. I will discuss entry-level software engineering programs for large companies and agile/technology training in both industry and computer science programs. I will describe (1) how the organizations to which I belong have faced the challenges of articulating different courses in a university program for innovation, (2) a university-wide cross-functional team of facilitators to help students navigate their way through the curriculum, (3) applications of active learning methodologies in both industry and university, and (4) the deployment of the inverted curriculum throughout a computer engineering program.

Keywords; *software engineering curricula; agile software development; millennials*

I. SPEAKER'S BIOGRAPHY

Diego Fontdevila holds a B.S. in Systems Engineering from the University of Buenos Aires, a M.Sc. in Software Engineering Management from Carnegie Mellon University/SEI, and is a Ph.D. candidate at the University of La Plata. He is an undergraduate professor at the University of Tres de Febrero and a graduate Professor at the Catholic University of Argentina. He has been a university teacher for 19 years, including at the University of Buenos Aires and the University of La Matanza. He has been working in the software development industry for 19 years. Since 2005, Mr.

Fontdevila has served as a founder and director of Grupo Esfera, a software development, training and consulting company based in Buenos Aires. He is an active member of the Agiles Latin American agile community, was co-chair of the Agiles 2010 Latin American Conference in Lima, Peru, and has been a speaker at several international conferences.

Mr. Fontdevila is also co-author of the book "Construcción de software: una mirada ágil".