Solution-based hybrid teaching within environmental sciences: A case from Abu Dhabi, Geneva and Los Angeles

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Cities are today’s living laboratories that take learning out of the classroom and put real-world challenges into context, yet the tools, resources and networks a city has to offer tend to be greatly underutilized within higher education spheres. While constructivist problem-based learning has increasingly become integrated within various domains at the university-level with much success, there still remains a gap in teaching students how to go from problem identification to implementation of innovative solutions. In this paper, we provide evidence from our hybrid course on Global Cities which combines in-class conceptual frameworks of pathways to urban sustainability with on-site visits and interactions with decision-makers and leaders in business, local government and civil society. We delve further into how our students were able to go beyond identifying sustainability challenges within Abu Dhabi, Geneva and Los Angeles and use their theoretical knowledge in tandem with their field experience to craft possible solutions in the form of policies, programs or projects. We argue that this style of teaching engages students through an interdisciplinary approach, which allows for developing crucial skills within both scientific inquiry and entrepreneurship such as communication, critical thinking, collaboration and self-directed learning. Furthermore, students develop the capacity to scope problems across issue-domains, such as urban sustainability, and address them through a connected systems analysis, such as the water-energy-food nexus. In our taking stock of current challenges and opportunities within these cities while engaging with multi-stakeholder actors, our students developed solution-based portfolios which solidified the effectiveness of this teaching model.