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Approaching Institutional Transplantation through Faculty Development

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The Challenge of 2020 calls for a reformed engineering education system that will arm future generations of engineers with the sophistication to be highly innovative global leaders, ready to deliver both in domestic and international settings [1,2,3]. To achieve this, up-to-date, effective teaching methods are necessary, supported in part by more extensive faculty development programs [4]. Despite this need, participation in faculty development programs is not part of the prevalent culture of engineering education [4]. Besides the requirement for effective teaching in the ideal, engineering faculty are the role models for the new generations of engineers. As such, they have an additional major part to play in creating the Engineer of 2020 - faculty culture and attitudes must also reflect the collective vision.

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With the vision of global competence [5] in mind, international collaborations between preeminent universities and new institutions are becoming increasingly frequent. The international collaborations that deserve special attention are those attempting a complete “institutional transplantation” [6] of an educational entity from one region of the world to another. The Massachusetts Institute of Technology (MIT) is currently collaborating with the Singaporean government and the Singapore University of Technology and Design (MIT-SUTD Collaboration) to achieve such a transplantation. To accomplish the development of a new engineering-oriented university, while in parallel addressing the timely formation of an institutional identity and culture that borrows from those of MIT, the MIT team used the following model based on three critical building blocks: (a) Collaborative Curriculum Development, (b) Immersive Faculty Development Program (FDP), (c) Support systems for students’ culture formation

In this paper we discuss the faculty development program in the context of this collaborative transplantation effort, and present the program objectives and model as it is currently implemented at MIT. ■

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