

SYMPAB - (16309) - UNDERSTANDING HOW ROLE MODELS MAKE AND BROADEN COMPUTER SCIENCE

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Short Abstract

In computer science, there are many efforts to broaden participation especially in terms of gender and ethnicity. A common component of these initiatives is role modeling. Here we introduce the idea of understanding and developing diverse role models in higher education through the analysis of computer science identity. We use ethics to reason about the discipline and role modeling in a teaching context. This work on diverse role models is based on [anonymized] previous model for role modeling. This model aims to support reflections on what can be modeled, by whom and how. It is based on an interview study with higher education teachers using a phenomenographic approach. A role model represents ways of participating and being recognized in the discipline. However, being a role model is limited and affected by the ways in which computing is constructed in social interaction. A longitudinal study conducted by [anonymized] shows how computer science is constructed in narrow ways, which limits the ways of being recognized as a computing student and professional. This limits the opportunities for role modeling, as is illustrated in this work. We use theories in ethics and education such as virtue ethics and Biesta's purposes of education to discuss the teacher's role in making visible various computer science identities through role modeling as a way of broadening the discipline and disciplinary identity.