

Abstract

Computer science progression rates at third level institutes in Ireland from first year into second year were recently estimated at 74%. It is well acknowledged that a large contributor to the lower progression rates in computer science is that students are struggling to master fundamental concepts in their first programming module. The PreSS model, developed using multiple institutions over three years, is intended to be an early warning system and is able to predict, at a very early stage, with nearly 80% accuracy the likelihood of whether a student would be successful in an introductory programming module.

In this workshop we wanted to replicate the accuracy of PreSS for two reasons. Firstly, the landscape, the population and the student profile has significantly changed over the last decade since PreSS was developed. Secondly, validation of any study is important as all too often studies are undertaken and never repeated potentially questioning their validity.

This workshop will discuss two independent studies completed in two academic years (2013-2015), that will be used to validate the PreSS model. A number of factors that could potentially improve the prediction accuracy of PreSS further will be presented and their inclusion in a large international study will be discussed. This international study that commenced in September 2015 consists of 750 students in 11 different institutions in Europe, varying from Universities and Colleges, to Community Colleges which cover the National Framework of Qualifications (NFQ) levels five up to eight.