<CODE PLUS/> coding for girls
Computer Science is too important to be left to boys, geeks and nerds! The lack of female participation in computer science (CS) is a challenging global phenomenon. The reasons for this are complex but there is agreement that a lack of understanding of what computing involves, a lack of visibility of female role models and a perception of CS as being for “geeks” are contributing factors.

CodePlus seeks to address this issue using a two strand approach. Firstly, by week-long, intensive (20 hour) coding workshops for girls and secondly through a speaker programme involving female computer engineers and professionals giving talks in girls secondary schools.

CodePlus was funded by ICS Skills (2015, 2016) and Science Foundation Ireland (2017). In 2018 the project is supported by Salesforce.

By the end of 2018 the projected numbers are that some 1,000 girls will have attended workshops and an additional 1,000 will have had a talk from a female volunteer speaker in a pilot roll out of the speaker component of the project.

CodePlus is an initiative of the Trinity Access 21 (TA21) project in Trinity College Dublin, the University of Dublin. TA21 is a collaboration between the Trinity Access Programmes, the Trinity Centre for Research in IT in Education, the School of Computer Science & Statistics and the School of Education. CodePlus uses the Bridge21 model of 21st century teaching and learning, promoting team-based, technology mediated learning.

80% of the participants in the workshops attend DEIS schools.
Student Core Workshop Numbers by Year

2015  ♂ ♂ ♂ ♂

2016  ♂ ♂ ♂ ♂ ♂

2017  ♂ ♂ ♂ ♂ ♂

2018*  ♂ ♂ ♂ ♂ ♂

*projected figure  ♂ represents 50 girls
Main Findings

Empirical results show significant increases in participants’ perceived programming ability and confidence and likelihood to apply for, and be accepted on, a computer science related course. There were also positive shifts in the participants’ perceptions of computer science in terms of stereotypical views held regarding the field and their own self-efficacy with the subject.

The programme is proving to be significant in changing the views of participants under a number of headings which contribute to lack of female participation in the IT industry.

* Students complete an attitudinal questionnaire before and after participation in CodePlus.
Rate your ability to program a computer
1 = Very poor  |  5 = Excellent

Increase of 20.9%

Scratch: Level of knowledge
1 = Very poor  |  5 = Excellent

Increase of 62.6%

How likely is it that you will apply to study a computer science related course in college/university
1 = Not at all likely |  5 = Very likely

Increase of 8.7%
Self-efficacy in Computer Programming

Pre CodePlus | Post CodePlus
---|---
1 = Very poor | 5 = Excellent

Increase of 7.3%

How confident are you in your ability to get accepted in to university/college to study a computer science related course?

How confident are you in your ability to get accepted in to university/college?

Increase of 10%

Increase of 3%
Pre CodePlus              Post CodePlus
1 = Strongly disagree | 5 = strongly agree

Intend to do a degree in Computer Science
Would like to do a degree in Computer Science
Very confident in my ability to use computers
As far as computers go, I feel competent
I consider myself a skilled computer user
I know a successful person that has CS degree

CODING FOR GIRLS