

## Main points from evaluation of ultra:bit, September 2020

The Center for Evaluation and Development of Science Education (NEUC) has on behalf of the Danish Broadcasting Corporation (DR) evaluated the ultra:bit project in schools. These are the main points from the evaluation from September 2020.

### **Students have learned how to code**

There has been a significant increase in the number of students expressing that they can code. In August 2018, 27% of the students answered that they can code. This number has increased to 78% in May 2020.

### **The girls' perception of having learned how to code has shifted more than the boys'**

In 2020, 76% of the girls answered that they can code. In 2018 it was 19%. In 2020, 80% of the boys answered that they could code. In 2018, it was 34%.

### **More boys and fewer girls than in 2018 believe that coding is for both boys and girls**

In May 2020, 77% of the boys answered that coding is as much for boys as for girls against 69% in August 2018.

In May 2020, 85% of the girls responded that coding is as much for boys as for girls against 89% in August 2018.

### **Most, and more boys than girls, find it fun to code**

In May 2020, 64% of the students answered that they think it's fun to code. There is a difference between boys and girls: where 55% of the girls answer that it's fun to code. Whereas 71% of the boys' answer that it's fun to code.

### **A degree of digital literacy exists among the students**

There is an awareness among students that technology can be both good and bad. Students can find widespread use for technology. 55% of the students agree that surveillance may be necessary. 44% expresses that hacking can happen and 76% agree that technology can be used for many things.

This is supported by interviews conducted in November 2019, where some students say that they're familiar with cookies and what to look out for to avoid getting viruses on your computer.

### **The use of BBC micro:bit is most likely to become widespread in schools**

DR ultra:bit seems to be able to gain foothold in the teacher's general practice. Many of the teachers who participated in the survey in May 2020, indicate that they use BBC micro:bits in their curriculum and develop their own activities. In addition, they indicate that other teachers have used BBC micro:bits in their teaching. The likelihood of widespread use of BBC micro:bits in schools is supported by interviews in November 2019, where some teachers expressed having used BBC micro:bits in other subjects.

### **DR ultra:bit showed teachers without coding skills that it's easy to code**

Most of the teachers who chose to participate in the study had no experience working with BBC micro:bit before DR ultra:bit, and found that after the project it was easier to code than they thought before they started.

DR ultra:bit has equipped teachers to teach how to use coding for creative solutions

Most of the teachers who participated in the study stated that DR ultra:bit had equipped them to teach how to use coding for creative solutions.

