

APPENDIX A
SURVEY INSTRUMENT

Computing knowledge and skills

| <i>Question or statement</i> | <i>Answer options</i> | <i>Score</i> |
|--|---|-------------------------|
| <i>During (high school/university)*, how good would you say you were at the following subjects:</i> | | |
| Maths | Did not take this subject Below classroom average Classroom average Above classroom average | 0 1 2 3 |
| <i>During (high school/university)*, how good would you say you were at the following subjects:</i> | | |
| Computer science or computing-related subject | Did not take this subject Below classroom average Classroom average Above classroom average | 0 3 6 9 |
| <i>During high school (or between age 12-18), how often would you do the following things?</i> | | |
| Physical computing (e.g. Raspberry Pi, Arduino, Micro:Bit, LEGO mindstorms, etc.) | Never or rarely (once in a year) | 0 |
| Programming | Occasionally (few times a year) Sometimes (once every month) Regularly (once every week) Always (every day or every other day) | 1 2 3 4 |
| <i>How often do you do the following things when NOT studying at university?</i> | | |
| Physical computing (e.g. Raspberry Pi, Arduino, Micro:Bit, LEGO mindstorms, etc.) | | |
| Programming | | |
| <i>How much do you agree with the following statements?</i> | | |
| I learn interesting things in computer science classes at university | Strongly disagree | -2 |
| It is useful to know about computers in my everyday life | Disagree | -1 |
| I am confident giving answers in computer science lessons | Neither agree nor disagree | 0 |
| I know how to use computing to solve problems | Agree | 1 |
| I know quite a lot about computing | Strongly agree | 2 |
| <i>How much do you agree with the following statements?</i> | | |
| I don't think I am clever enough to study computing at university | Strongly disagree Disagree Neither agree nor disagree Agree Strongly agree | 2 1 0 -1 -2 |
| Computing goals and career aspirations | | |
| <i>Question or statement</i> | <i>Answer options</i> | <i>Score</i> |
| <i>How much do you agree with the following statements?</i> | | |
| After graduation, I would like to have a job that involves computing | Strongly disagree | -2 |
| Computing is useful to achieve my goals in life | Disagree | -1 |
| A computer science or computing-related qualification can help you get many different types of jobs | Neither agree nor disagree | 0 |
| It is important to study computing even if I don't want to work in a computing-related job | Agree Strongly agree | 1 2 |
| After your university studies, what profession would you like to have? Type "don't know" if you need to. | Profession not related to computing Computing-related profession | 0 5 |
| Do you think you might like to work in a computer science or computing-related job in the future? | No Yes | 0 2 |
| You said you might like to have a computer science or computing-related job in the future. Can you tell us why this might be the case? | Opportunity to help others Well respected/high status Opportunities to make exciting new discoveries Secure Interesting Lots of different types of jobs available Well paid Good work/life balance Personally satisfying Other | 0.5 for each item |

*Question was asked separately for high school and university

| Computing support from family and friends | | |
|--|---|--|
| <i>Question or statement</i> | <i>Answer options</i> | <i>Score</i> |
| What did your parent(s) and/or carer(s) study at university? | Non-computing related degree Computing-related degree | 0 for each parent/carer 1 for each parent/carer |
| What are the professions of your parents and or carers? If retired or deceased, please mention the latest profession that applied | Non-computing related profession Computing-related profession | 0 for each parent/carer 1 for each parent/carer |
| <i>How much do you agree with the following statements?</i> <i>One or both of my parents and/or carers:</i> Has introduced me to computers or computing-related concepts at home | Strongly disagree Disagree Neither disagree nor agree Agree Strongly agree | -2 -1 0 1 2 |
| <i>One or both of my parents and/or carers:</i> Has explained to me that computing is useful for my future | | |
| When you are NOT studying, how often do you talk about computer science or computing with someone? | Never or rarely (once in a year) Occasionally (few times a year) Sometimes (once every month) Regularly (once every week) Always (every day or every other day) | 0 1 2 3 4 |
| Who do you talk with about computer science or computing-related subjects? | Friends Parents and/or carers Other family members or relatives Other | 1 for each item |
| Do you know anyone who works in a computer science-related field or in a job that uses computing? | | |
| Computing attitudes and values | | |
| <i>Question or statement</i> | <i>Answer options</i> | <i>Score</i> |
| <i>How much do you agree with the following statements?</i> Getting young people to understand computers is important for our society Computer science and computing creates new jobs so more people can have work | Strongly disagree Disagree Neither disagree nor agree Agree Strongly agree | -2 -1 0 1 2 |
| Computing media consumption | | |
| <i>Question or statement</i> | <i>Answer options</i> | <i>Score</i> |
| <i>During high school (or between age 12-18), how often would you do the following things?</i> Playing videogames Watching streamers or YouTubers play videogames and/or do other computing | Never or rarely (once in a year) Occasionally (few times a year) Sometimes (once every month) Regularly (once every week) Always (every day or every other day) | 0 1 2 3 4 |
| <i>How often do you do the following things when NOT studying at university?</i> Playing videogames Watching streamers or YouTubers play videogames and/or do other computing | | |
| Participation in computing activities | | |
| <i>Question or statement</i> | <i>Answer options</i> | <i>Score</i> |
| <i>During high school (or between age 12-18), how often would you do the following things?</i> Going to informal computing activities (e.g. coding clubs, makerspaces, hackathons, gaming activities, etc.) | Never or rarely (once in a year) Occasionally (few times a year) Sometimes (once every month) Regularly (once every week) Always (every day or every other day) | 0 1 2 3 4 |
| <i>How often do you do the following things when NOT studying at university?</i> Going to informal computing activities (e.g. coding clubs, makerspaces, hackathons, gaming activities, etc.) | | |