

<https://dl.acm.org/doi/pdf/10.1145/3502718.3524815> - Increasing Students' Persistence in Computer Science through a Lightweight Scalable Intervention – Akram et al., ITiCSE 2022

This is a sample of the questions from the pre-and-post surveys sent to students.

### **Self-assessments of computing ability scale**

For each survey, students indicated their agreement to each statement on a 7-point Likert scale (where 1 is “strongly disagree” and 7 is “strongly agree”):

- (1) Computer Science is one of my best subjects.
- (2) I get good grades in Computer Science.

Students also reported their own CS ability on a 7-point Likert scale where 1 is “considerably below average” and 7 is “considerably above average.”

### **Professional role confidence scale**

For each survey, students answered the question: “How confident has this Computer Science course made you in regards to the following:”

- (1) Your development of useful skills.
- (2) Advancing to the next level in Computer Science.
- (3) Your ability to be successful in your career.
- (4) That Computer Science is the right profession for you.
- (5) That you can select the right sub-field of Computer Science.
- (6) Your ability to find a satisfying job.
- (7) Your commitment to Computer Science.

Confidence was indicated on a 4-point Likert scale where 1 is “not confident at all” and 4 is “highly confident.”

### **Sense of belonging scale**

Students were asked: "Indicate to what extent you agree with the following statements regarding Computer Science at NCSU." and responded according to a 7-point Likert scale. Items for the sense of belonging scale include:

- (1) I belong in Computer Science at NCSU.
- (2) I feel comfortable in Computer Science at NCSU.
- (3) Other people understand more than I do about what is going on in Computer Science at NCSU.
- (4) I think in the same way as do people who do well in Computer Science at NCSU.

- (5) It is a mystery to me how Computer Science at NCSU works.
- (6) I feel alienated from Computer Science at NCSU.
- (7) I fit in well in Computer Science at NCSU.
- (8) Compared with most other Computer Science students at NCSU, I am similar to the kind of people who succeed in Computer Science.
- (9) Compared with most other students at NCSU, I know how to do well in Computer Science.
- (10) Compared with most other Computer Science students at NCSU, I get along well with people in Computer Science.

### **Intentions to persist in computing scale**

Students were asked how likely they were to do each of the following on a 7-point Likert scale where 1 is "highly unlikely" and 7 is "highly likely.":

- (1) Take another course in Computer Science.
- (2) Get involved with undergraduate Computer Science research.
- (3) Get involved with Computer Science clubs.
- (4) Compete in a hackathon.
- (5) Apply for a Computer Science internship.
- (6) Minor in Computer Science
- (7) Major in Computer Science.
- (8) Apply to graduate School in Computer Science.
- (9) Apply to graduate programs requiring high levels of Computer Science ability.
- (10) Apply for jobs requiring high levels of Computer Science ability.