

# What supports helped college students succeed in their CS programs?

## Prior experience with CS in high school or extracurricular activities

**45.8%**

*Content knowledge, interest, confidence, motivation, and CS identity*

**"I found that this prior experience gave me a head start and made the material feel less intimidating."**

## Study groups with my peers

**35.9%**

*Peer support, collaboration, motivation, community, sense of belonging*

**"Being in a study group has given me the opportunity to be able to reinforce my understanding of the course material and allow me to get help when needed."**

## Faculty or peer mentoring

**28.2%**

*Academic guidance, encouragement, motivation*

**"I received professional advice, access to tools for the IT industry, and assistance in navigating the difficulties of my CS program from faculty or peer mentors."**

## Other

**14.8%**

*Online resources, self-teaching, professional experience*

**"YouTube is a great source, there are a lot of creators and communities that are willing to help on topics that you may not have understood in class."**

## Class supports

**45.5%**

*Academic support, office hours and labs, professors, community*

**"...class support allowed me to experiment with what I was learning and has opened up my vision of how hands-on work can really apply to the everyday applications of reality."**

## Family or friends within the CS field to help navigate

**35.8%**

*Academic and career guidance, encouragement, motivation, sense of belonging*

**"They were able to answer my questions, provide advice on coursework and career opportunities, and offer encouragement..."**

## Campus supports

**20.9%**

*CS tutors, academic support, mental health services, community, advice*

**"My college had resources such as academic advisors, career services, and mental health services, which were valuable in helping me navigate college life and plan for my future."**

## Student organizations or social functions within the department or university

**15.7%**

*Academic support, joining clubs, sense of belonging, community, confidence and motivation*

**"Joining the Computer Science [...] helped me to determine how to continue through the degree as well as helped me reaffirm that computer science is something that I would like to continue doing."**



See what else students had to say about their CS programs in Illinois. Read the full report here:

<http://go.dpi.uillinois.edu/cser>

# What were the largest barriers to students' success in their CS programs?

**Coursework was overwhelming or too fast paced**

**49.5%**

*Struggling to keep up, impact on motivation, heavy course load, difficult material*

**"...so much workload tends to make me rush and with that comes mistakes and slow performance."**

**Lack of high school preparation**

**35.0%**

*Lack of prior experience, inadequate prep in high school courses, course availability*

**"...most people I have spoken to [...] have been taking [CS] since early high-school. This has caused me to feel unconfident and self conscious in my ability."**

**Other**

**16.5%**

*Studies-life balance, course format or structure, course content, course availability*

**"... I am 25 years old, I live out on my own, and I'm fighting for survival everyday trying to work and make money and at the same time finish up school..."**

**Not many of my peers looked like me**

**12.9%**

*Lack of community and sense of belonging, race and/or gender underrepresentation*

**"I am an inexperienced woman in CS which is a recipe for disaster. I constantly feel like I have to prove to the male students in my class that I belong there."**

**Negative interactions with the CS community**

**9.8%**

*Interactions with other students, "CS people" stereotypes*

**"There isn't enough Latino representation in tech [...] It feels like a toxic boys club that excludes people based on race, culture, and sex."**

**Lack of access to personal devices or internet**

**8.4%**

*Access to computers, software requirements, internet access and speed*

**"I faced some financial difficulties this [...] semester and so I did not have access to a laptop [...] This made it a bit difficult to spend as much time as I wanted on my CS course"**

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**Poor teaching**

**37.5%**

*Teaching approaches, impact on learning and motivation, insufficient support*

**"My instructor was not very good at explaining the material. They would merely read from long PowerPoint presentations and practically hand out the answers..."**

**Inadequate advising**

**22.0%**

*Course selection and enrollment, lack of proper guidance*

**"Bad advising has extended my university stay by two semesters. Finding credit hours to keep Full Time status and Financial Aid is now a challenge"**

**Lack of inclusive culture**

**15.7%**

*Race and/or gender underrepresentation, lack of sense of belonging*

**"It can be a bit intimidating at times being a woman pursuing a degree in tech. In a way, it's motivating to be a female software engineer since there is such a lack of them."**

**Lack of support from friends and family**

**10.1%**

*Lack of understanding, career decisions*

**"Not many members from my family understand my program, so it is intimidating as a first generation Latino to enter CS programs."**

**Course content was not relevant to my life**

**8.6%**

*Academic relevance, personal relevance, industry relevance*

**"Some classes are never needed in the future work environment and made me feel demotivated to learn it."**

(IWERC)

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