National Cyber Security Alliance and Raytheon Survey Findings 2015

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Core Initiatives

National Cyber Security Awareness Month

DATA PRIVACY DAY
The Study

SECURING OUR FUTURE: CLOSING THE CYBERSECURITY TALENT GAP

We need a strong global cybersecurity workforce more than ever, and young adults will be the next generation of cyber defenders and leaders. Millennials ages 18 to 26 from 12 countries told us:
Why this survey?

• Work has been done on:
  • the number of jobs
  • Skills, knowledge and abilities

• We wanted to ask the customer what they knew and how they view this career path
Awareness Gap

- Only 26% of those with only high school educations said they were approached about cyber careers by teachers.
- 37% believe their high school or secondary school computer classes prepared them for careers in cybersecurity.

69% have not – or are unsure if they have – ever spoken to a cybersecurity professional.
Gender gap

Men 40%
Women 28%
Approached by a teacher about cybersecurity careers

Men 42%, Woman 32%
Classes prepared them to pursue a cybersecurity degree
Skills disconnect

YOUNG ADULTS WANT JOBS USING SKILLS CYBER PROFESSIONALS NEED

• 56% problem solving
• 54% communication
• 42% data analysis
• 28% programming

YOUNG ADULTS WHO SAY NO CYBERSECURITY PROGRAMS OR ACTIVITIES ARE AVAILABLE TO THEM: 32%
The role of parents

• 40% said parents were the most influential person helping with career advice.

• Globally only 26% of men and 18% of women are confident in their parents’ ability to guide them in pursuing a cybersecurity career.

• And only 22% have received any information about or had their child (or children) mention participation in a cyber-challenge or cyber competition?
The role of parents

NCSA’S PARENT PRIMER FOR GUIDING KIDS TO CAREERS IN CYBERSECURITY

In the recent *Securing Our Future: Closing the Cyber Talent Gap* survey conducted by Raytheon and the National Cyber Security Alliance (NCSA), 40 percent of millennials (18- to 26-year-olds) internationally indicated that parents were a primary source of career advice, yet only 22 percent stated they were “very confident” that their parents could help guide them on pursuing careers in cybersecurity.

It’s not surprising that parents might not be knowledgeable about careers in cybersecurity, since it’s a relatively new profession, and most probably have not met or known someone in this line of work. With this in mind, NCSA has gathered user-friendly resources parents can tap to educate themselves and have conversations with their children about the many rewarding opportunities in the cybersecurity workforce.

**Cyber Challenges**

More than a third of young people (34%) report that they are interested in jobs in which they think they could do well. How do they determine if cybersecurity might be a good fit? Cyber challenges (sometimes called *Capture the Flag* exercises or cyber competitions) are great ways to expose kids to the field. These challenges take a variety of forms but are usually online or computer-based exercises (often conducted in teams) that engage participants in protecting networks and systems. There are challenges for middle- and high school students as well as college competitions. [CyberCampEx](https://www.nationalcybersecurityalliance.org/cybercampex) is a great resource for learning more about cyber challenges.

The [GenCyber](https://www.nationalcybersecurityalliance.org/gencyber) program provides summer cybersecurity camp experiences for K-12 students and teachers. The program aims to help all students understand safe online behavior, grow diversity and interest in the cybersecurity field and careers in the nation's cyber workforce and improve teaching methods for delivering cybersecurity content in K-12 computer science curricula.
What do we do about it?

• Change our language: talk about careers protecting the internet, with more specificity – not just the all-encompassing cybersecurity professional.
• Don’t get hung up on too many specifics – what we call it, technical skills, etc.
• Communicate better and align the skills in cybersecurity jobs with the career skills and opportunities young people say they want.
• Create opportunities where young people can gain insight/reflect on the relevance of their own skills and passions and how they would be used in cybersecurity careers.
• Emphasize portability and sector universality of careers.
• Review job descriptions to be sure they reflect actual requirements vs wish/laundry lists of degree and certifications – this is especially important in recruiting some people.
• Participate in cyber challenges.
What to do about it?

• Interface with industry and open dialogues between professionals and students.
• Engage in the community: send cybersecurity professionals into schools to discuss their jobs and staying safe online.
• Get local cybersecurity professionals to mentor and sponsor a cyber challenge team.
• Educate parents
• Create internships and summer jobs.
• Connect with community colleges and other institutions to expose students to the educational pathways.
• Educate guidance and other college counseling staff on careers in cybersecurity and academic institutions with cybersecurity programs.
Create a pipeline

- Educate parents
- Identify talent early and support into careers
- Create internships and summer jobs.
- Create early connections between students and higher ed.
- Educate guidance and other college counseling staff on careers in cybersecurity and available academic institutions
Resources

• ESET Study:
  • www.staysafeonline.org
• DHS NICCS Portal: https://niccs.us-cert.gov/
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