NICE Webinar Series
NATIONAL INITIATIVE FOR CYBERSECURITY EDUCATION

Educating Youth for a Cybersecurity Future
September 16, 2020

- REGISTRATION OPEN – Early Bird $125 until October 16. Regular $150

- AGENDA IS LIVE – 60+ presenters, live & on-demand sessions available through 2021!

- STUDENT KEYNOTE – Sam Grant, Junior from Moscow, Idaho

- STUDENT TRACK – Planning now. Free, get on mailing list for announcement

- SPONSORS & EXHIBITORS – High visibility, multiple networking opportunities

- ENGAGEMENT & NETWORKING – Attendees are posting to discussion boards now!

JOIN THE MAILING LIST ON THE WEBSITE FOR UPDATES

National Cybersecurity Career Awareness Week

Goals

Securely Provision

Protect and Defend

Collect and Operate

Investigate

Analyze

Operate and Maintain

Oversee and Govern

National Cybersecurity Career Awareness Week

NOVEMBER 9-14

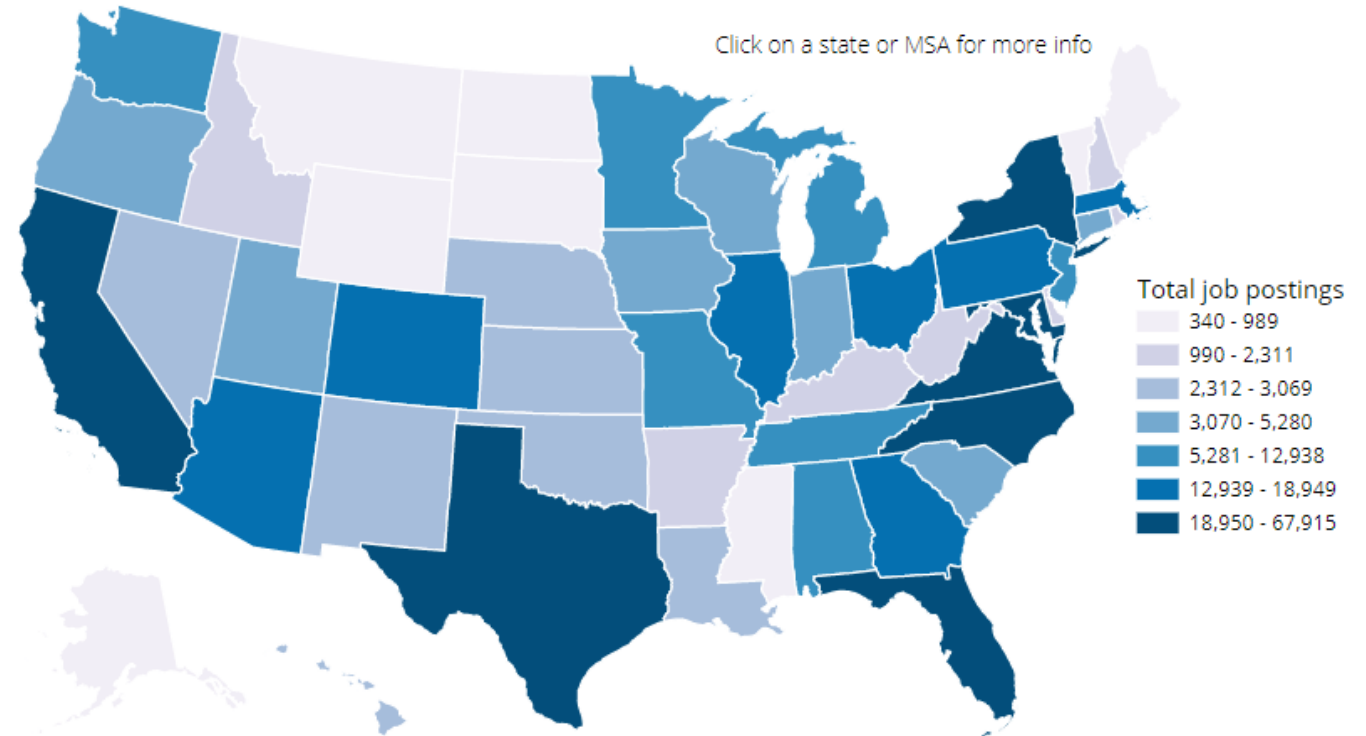|	
Inspire, Engage, and Inform	Goal 1: Inspire, Engage, and Inform the Nation
Demystify	Goal 2: Demystify Careers in Cybersecurity
Develop	Goal 3: Develop a Highly Skilled and Diverse Workforce

THE WHY
Critical Cyber Workforce Shortage

Our national security and economic stability depends on us solving it.

- Employers are desperate for cyber degree program graduates.[3]

- **507,924 cybersecurity job vacancies** (Jun. 2019- May 2020)[1], and the shortage continues to grow[2]

- Cybercriminals now responsible for **billions in losses per year** and **state-sponsored hacking groups** posing an ever-greater threat.[3]

Cybersecurity Supply/Demand Heat Map
Total Job Openings

Click on a state or MSA for more info

Total job postings
340 - 989
990 - 2,311
2,312 - 3,069
3,070 - 5,280
5,281 - 12,938
12,939 - 18,949
18,950 - 67,915

1   CyberSeek.org
2   Supporting the Growth and Sustainment of the Nation's Cybersecurity Workforce. https://www.nist.gov/ sites/default/files/documents/2018/07/24/eo_wf_report_ to_potus.pdf
3   The Cybersecurity Workforce Gap. William Crumpler & James A. Lewis. https://csis-prod.s3.amazonaws.com/s3fs-public/publication/190129_Crumpler_Cybersecurity_FINAL.pdf
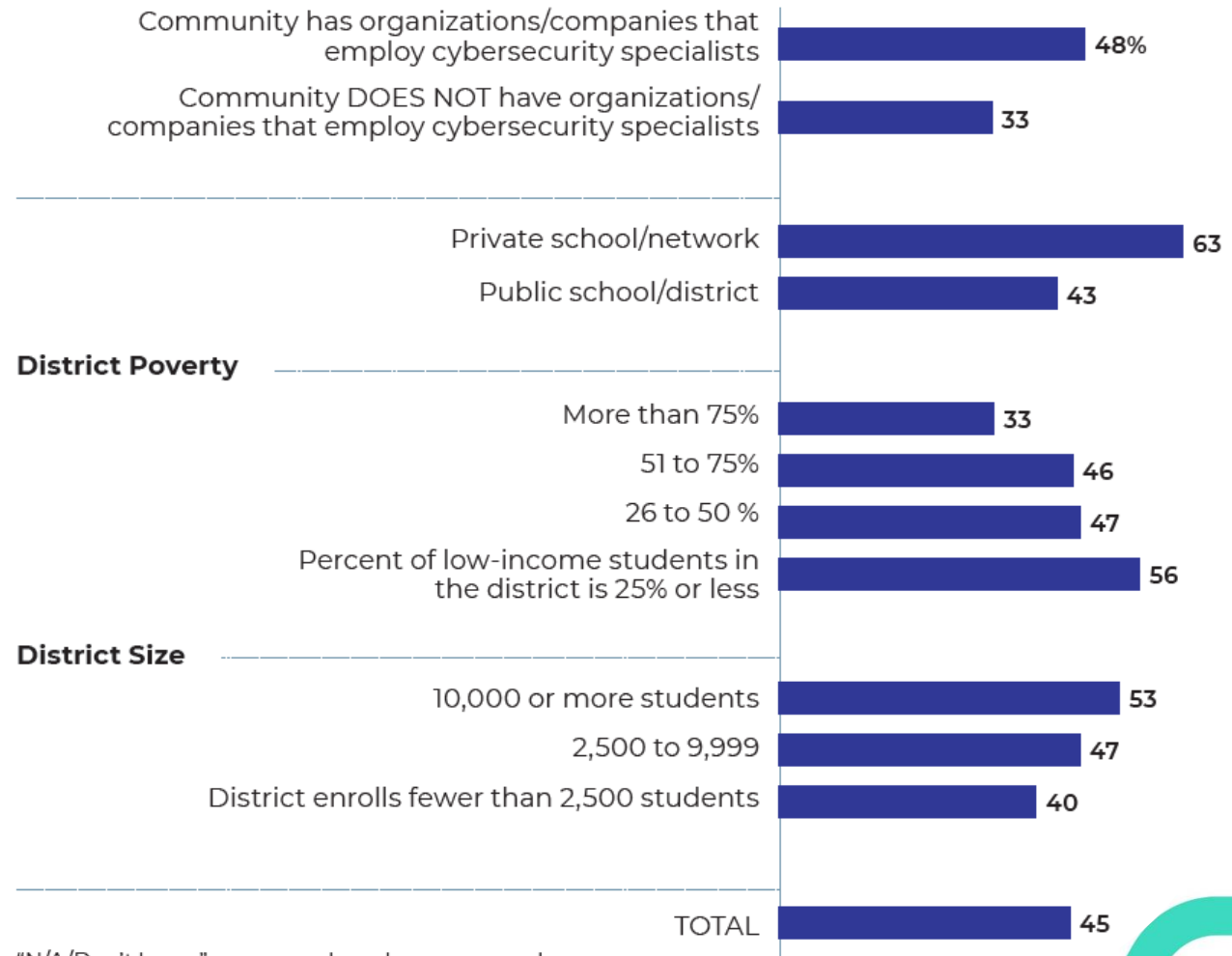
CYBER.ORG

State of Cybersecurity Education in K12 Schools
Key Findings

- **Less than half of educators surveyed (45%)** say students are taught cybersecurity

- **Access to cybersecurity education resources is not consistent** across communities and educational settings

- Cybersecurity education is **more available to the higher socioeconomic regions** of the country, leaving out students in rural, low-income areas

Percent of survey respondents who say their students currently receive cybersecurity education

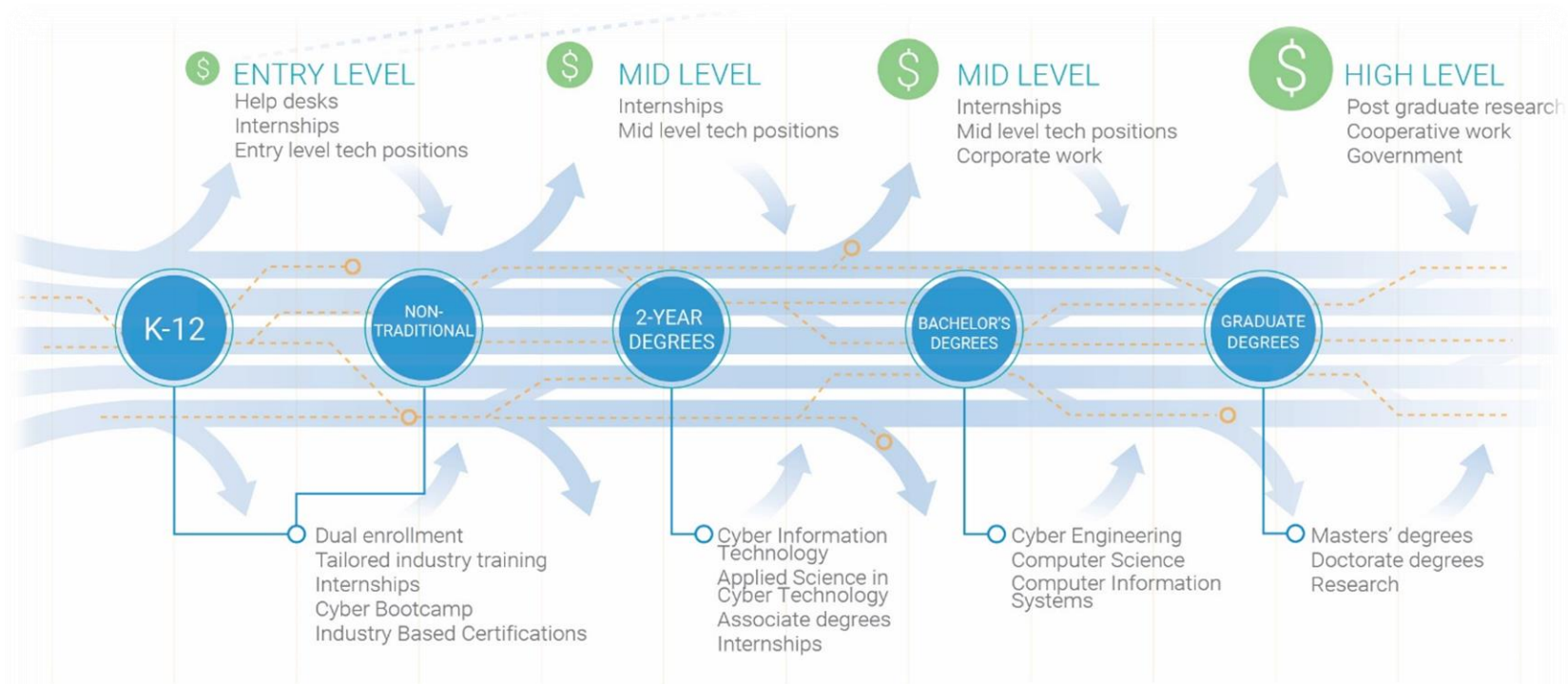|	
Community has organizations/companies that employ cybersecurity specialists	48%
Community DOES NOT have organizations/companies that employ cybersecurity specialists	33
Private school/network	63
Public school/district	43
District Poverty	
More than 75%	33
51 to 75%	46
26 to 50 %	47
Percent of low-income students in the district is 25% or less	56
District Size	
10,000 or more students	53
2,500 to 9,999	47
District enrolls fewer than 2,500 students	40
TOTAL	45

"N/A/Don't know" responses have been removed.

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THE WHAT
Workforce Development Programs

The solution for solving this workforce crisis is developing a capable national workforce, bolstered by a dependable pipeline of individuals entering that workforce at every level of education.
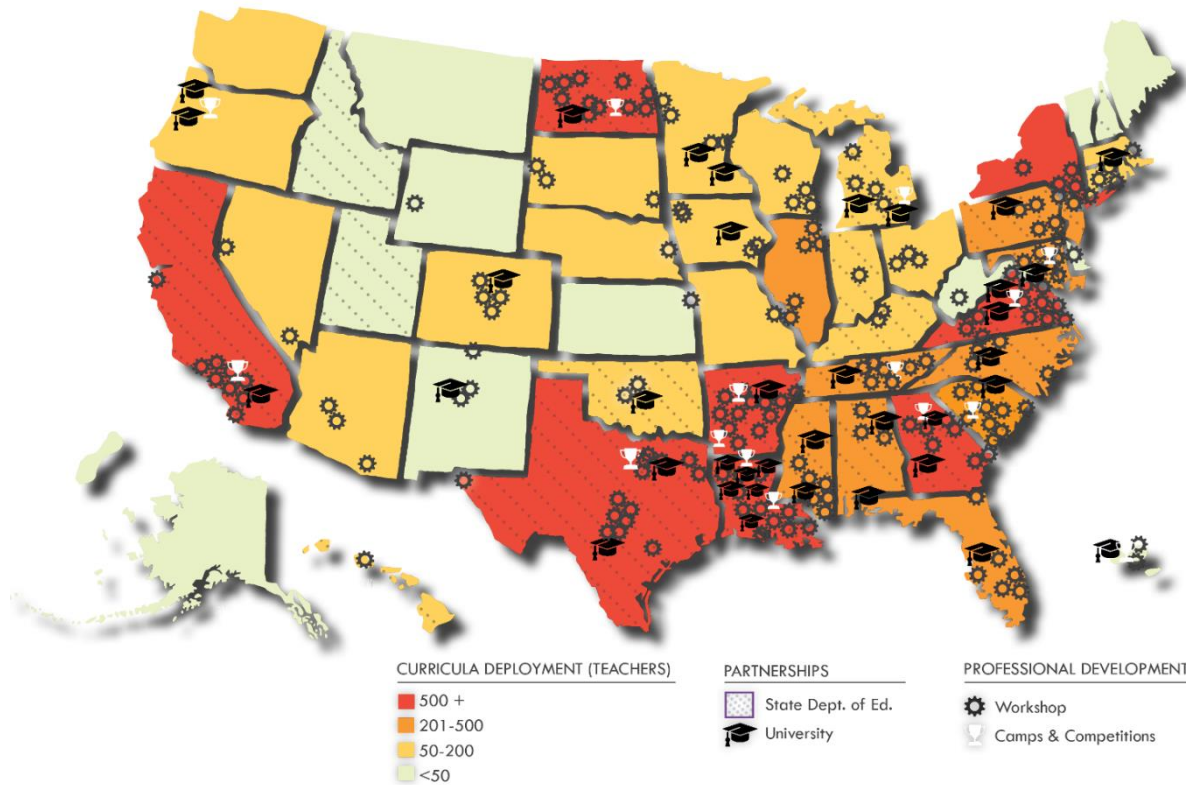
THE HOW
CYBER.ORG Solution

*We believe that the solution starts with reshaping K-12 education to include **cyber career awareness, curricular resources** and **professional development.***

- Develop and distribute K-12 cyber resources
  - Curriculum and partner projects like Palo Alto Networks Cyber ACES, Girl Scout Cybersecurity Badges, Career Profile Cards
- Empower K-12 educators through train-the-trainer model
  - Specialize in equipping teachers with curricula and training as we cannot reach all K-12 students directly, teachers are our force multipliers. Train-the trainer model.
- Scalable Program Model
  - CYBER.ORG's replicable program model allows for continued national expansion through multi-level K-12 education engagement.

CYB=R.ORG

THE HOW
CYBER.ORG Curricula and Professional Development

CURRICULA DEPLOYMENT (TEACHERS)
- 500 +
- 201-500
- 50-200
- <50

PARTNERSHIPS
- State Dept. of Ed.
- University

PROFESSIONAL DEVELOPMENT
- Workshop
- Camps & Competitions

CYBER.ORG's Content and Curricula is the vehicle by which we reach students with cyber education and training as well raising cyber career awareness

Strategic Curricula & Professional Development Partners

THE HOW
CYBER.ORG Solution

How campaigns can help increase online safety and career awareness?

- cam·paign (/kamˈpān/) noun:
  - a series of military operations intended to achieve a particular objective, confined to a particular area, or involving a specified type of fighting.
- Cybersecurity Awareness and Digital Literacy Campaigns
  - CTF
  - Tabletop challenges
  - Group research projects
  - National Resources
    - Girl Scouts of the USA
    - Palo Alto Networks
    - CyberPatriot

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THE HOW
CYBER.ORG Solution

How to introduce cybersecurity into educational curriculum?

- Elementary and Middle School
  - Cyber Pop-Outs in core science curriculum allowing students to make every-day connections to 21st century learning opportunities
  - Coding and intro to security projects with micro:bit

- High School
  - Various CompTIA-based courses
    - A+, Security+, IT Fundamentals+ (by end of calendar year), Network+ (by start of 2021 school year)
  - Opportunities for conversations relating to cyber ethics, business, politics, terrorism, law
  - "Tabletop" simulations referred to as Analysis and Investigation of Cyber-based Scenarios, or AICS
  - Micro:bit-based cyber:bot programming challenges bringing in cybersecurity concepts

Pathway Opportunities for High School Students

Year 1	Year 2	Year 3	Year 4

Cyber Engineering Track

Cyber Fundamentals	Cyber Literacy	Cyber Science	Cyber Engineering

Cybersecurity and Certifications Track

IT Fundamentals	A+	Network+	Security+

Elective Opportunities

Computational Thinking	Cyber Society

Advanced Mathematics	Crypto Math

CYBER.ORG

THE HOW
CYBER.ORG Solution

- Supporting "Opportunity Youth" to explore cybersecurity as an area of study or careers

- CYBER.ORG is preparing to provide homeschool or alternative learners with opportunities to study CTE-style courses, possibly making A+, Sec+, or Net+ available to student learners

- While currently, year-long content is made available to teachers and educators, not parents or students, post-COVID learning might include access for all students

Q & A

About ACTE

Largest national education association of professionals dedicated to the advancement of CTE

- Achieving policy victories and increasing legislative activity around CTE

- Representing excellence and leadership in CTE for 90+ years

- Delivering robust professional development

- Growing a partnership network that provides added member value

- Nurturing a culture of recognition for excellence and inclusion of members in setting organizational direction

WHY CTE?

CTE provides opportunities for students to gain technical, academic, and professional leadership skills for college and career success.

- CTE works for high school students
- CTE works for college students
- CTE works for the economy
- CTE works for business

The top 3 benefits benefits for students are the attainment of:

- **COMPETENCIES** to qualify them for a cybersecurity career
- **EMPLOYABILITY SKILLS** such as teamwork
- **REAL-WORLD EXPERIENCES** to apply learning

Students can take advantage of CTE cybersecurity content through:
- Individual CTE courses
- A sequence of classes
- Career Academies
- Programs of Study
- Early College High Schools
- Content across the 16 Career Clusters®

The U.S. Department of Education, Office of Career, Technical, and Adult Education administers CTE programs funded under the Perkins Act through grants to states. Visit https://cte.ed.gov.

APPLIED LEARNING on technical topics integrated with rigorous academics and employability skills

PORTABLE CREDENTIALS such as industry-recognized certifications and college credits

PRACTICAL APPLICATION of knowledge and skills through work-based experiences

CTE Programs of Study (POS) are authorized and funded through the Carl D. Perkins Career and Technical Education Act of 2006. A high-quality POS includes the 10 components of the **Programs of Study Design Framework**, such as:

- providing non-duplicative progression of courses that align secondary to postsecondary education;
- including opportunities for dual or concurrent enrollment programs;
- leading to an industry-recognized certification, certificate at the postsecondary level, or an associate or baccalaureate degree; and
- including work-based learning experiences, such as apprenticeships and internships.

Information Technology CareerClusters

The National Career Clusters®, maintained by Advance CTE, provides the organizing structure for delivering quality CTE programs with **16** career clusters and **79+** pathways.

Cybersecurity is most often included in the Information Technology Career Cluster. Visit https://careertech.org.

NICE — NATIONAL INITIATIVE FOR CYBERSECURITY EDUCATION

nist.gov/nice

NIST — National Institute of Standards and Technology — U.S. Department of Commerce

CYBERSECURITY

CTE: YOUR PATHWAY TO CYBERSECURITY CAREERS

Career and technical education (CTE) programs have proven to be an effective approach to prepare secondary and post-secondary students to succeed in cybersecurity careers.

How can CTE help me succeed in cybersecurity?

CTE provides students with academic, technical and employability skills for a career in cybersecurity through:

- CTE courses in network security, cybersecurity, cyber crime and more
- Work-based learning experiences, such as job shadowing and internships
- Career and technical student organizations, such as SkillsUSA and the Technology Student Association
- Opportunities to earn college credit and industry certifications in high school, and ultimately to earn postsecondary certificates and degrees

More than **300,000** U.S. jobs needing cybersecurity skills are unfilled.[1]

The need for information security analysts **will grow by 28%** through 2026, making it one of the top 20 fastest-growing occupations.[2]

In metropolitan areas, **salaries for cybersecurity professionals can reach $380,000.**[3]

Cybersecurity professionals work in IT, health care, manufacturing, defense, finance and other sectors.

COMPUTER NETWORK ARCHITECT [4]
Design and build data communication networks
$104,650 per year
At least a bachelor's degree

NETWORK AND COMPUTER SYSTEMS ADMINISTRATOR [5]
Oversee the daily operation of computer networks
$81,100 per year
At least a postsecondary certificate

INFORMATION SECURITY ANALYST [6]
Plan and implement measures to protect computer networks and systems
$95,510 per year
At least a bachelor's degree

Many job openings ask for industry certifications, including:[7]
CompTIA Security+ · (ISC)² Certified Information Systems Security Professional (CISSP) · (ISC)² Systems Security Certified Practitioner (SSCP) · Global Information Assurance Certification Security Essentials (GSEC)

[1] https://www.cyberseek.org/heatmap.html (April 2017–March 2018 data)
[2] https://www.bls.gov/ooh/computer-and-information-technology/information-security-analysts.htm
[3] https://www.forbes.com/sites/stevemorgan/2016/01/09/top-cyber-security-salaries-in-u-s-metros-hit-380000/#248643ac7ef8
[4] https://www.bls.gov/ooh/computer-and-information-technology/computer-network-architects.htm
[5] https://www.bls.gov/ooh/computer-and-information-technology/network-and-computer-systems-administrators.htm
[6] https://www.bls.gov/ooh/computer-and-information-technology/information-security-analysts.htm
[7] https://www.cyberseek.org/heatmap.html

Association for Career and Technical Education — ACTE

OCTOBER 2018

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www.acteonline.org

Association for Career and Technical Education

ACTE

CTE K12 CAREER PATHWAYS FOR CYBERSECURITY STUDY

Study Funded by the National Security Agency (NSA)

Abstract:
The goal of this study is to examine the current state of cybersecurity career programs of study and the career pathways systems that support these programs.

John Sands, Ph.D.
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NICE NATIONAL INITIATIVE FOR CYBERSECURITY EDUCATION

- Agriculture, Food & Natural Resources -
Agribusiness Systems; Animal Systems; Environmental Service Systems; Food Products & Processing Systems; Natural Resources Systems; Plant Systems; Power, Structural & Technical Systems Architecture & Construction

- Architecture & Construction -
Construction; Design/Pre-Construction; Maintenance/Operations

- Arts, A/V Technology & Communications -
A/V Technology & Film; Journalism & Broadcasting; Performing Arts; Printing Technology; Telecommunications; Visual Arts

- Business Management & Administration -
Administrative Support; Business Information Management; General Management; Human Resources Management; Operations Management

- Education & Training - *Administration & Administrative Support; Professional Support Services; Teaching/Training*

- Finance - *Accounting; Banking Services; Business Finance; Insurance; Securities & Investments*

- Government & Public Administration -
Foreign Service; Governance; National Security; Planning; Public Management & Administration; Regulation; Revenue & Taxation

- Health Sciences - *Biotechnology Research & Development; Diagnostic Services; Health Informatics; Support Services; Therapeutic Services*

- Hospitality & Tourism -
Lodging; Recreation, Amusements & Attractions; Restaurants & Food/Beverage Services; Travel & Tourism

- Human Services - *Consumer Services; Counseling & Mental Health Services; Early Childhood Development & Services; Family & Community Services; Personal Care Services*

- Information Technology - *Information Support & Services; Network Systems; Programming & Software Development; Web & Digital Communications*

- Law, Public Safety, Corrections & Security -
Correction Services; Emergency & Fire Management; Law Enforcement Services; Legal Services; Security & Protective Services

- Manufacturing -
Health, Safety & Environmental Assurance; Logistics & Inventory Control; Maintenance, Installation & Repair; Manufacturing Production Process Development; Production; Quality Assurance

- Marketing -
Marketing Communications; Marketing Management; Marketing Research; Merchandising; Professional Sales

- Science, Technology, Engineering & Mathematics -
Engineering & Technology; Science & Mathematics

- Transportation, Distribution & Logistics -
Facility & Mobile Equipment Maintenance; Health, Safety & Environmental Management; Logistics Planning & Management Services; Sales & Service; Transportation Operations; Transportation Systems/Infrastructure Planning,

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PROGRAM OF STUDY DESIGN FRAMEWORK

"A program of study is a structured sequence of academic and career and technical courses leading to a postsecondary-level credential."
- Operational definition

Legislation and Policies

Professional Development

SECONDARY LEVEL

College and Career Readiness Standards

Curriculum and Instruction

Guidance

Course Sequences

Credit Transfer Agreements

Advisement

Assessments

Credentials

Partnerships

Evaluations

POSTSECONDARY LEVEL

Professional Development

Accountability

Key Elements

- Model programs have effective **counseling and advising** that inspire, engage, and inform parent and students about the demand, opportunities, and multiple career options available within the area of cybersecurity.

- Rigorous programs have **highly qualified educators** who meet appropriate certification and licensing requirements, maintain relevant evidence-based pedagogical strategies, are well-qualified, and stay up to date on the industry needs.

- Exemplary programs have **abundant access** to high quality and relevant training, resources, and equipment.

- Robust programs include a sequence of courses that incorporate **technical, academic and employability knowledge and skills** that are standards-based, industry-aligned, and incorporate multiple forms of evaluation, including performance-based assessments.

- High quality programs vigorously pursue strategies to scale high-quality **work-based learning** opportunities for all students.

- Stellar programs proactively implement research-based **diversity and inclusion** strategies to successfully attract, recruit, and retain underrepresented groups.

Recommendations

- Creation and distribution of career awareness campaign material that informs parents, students, educators, and school counselors about timely information on regional occupational trends and outlooks, demand, opportunities, career options, and CTE cybersecurity related pathways. Distribution should also include research-based **diversity and inclusion** strategies to successfully attract, recruit, and retain underrepresented groups in cybersecurity work roles.

- Educate the CTE community about and encourage educators to use the taxonomy and lexicon of the NICE Cybersecurity Workforce Framework as the reference for developing cybersecurity CTE related pathways.

- Expand model CTE cybersecurity related pathways for a wide range of cybersecurity-related work roles by developing knowledge and skills statements that can be incorporated into all Career Clusters™. More distinctive statements should be crafted for specific Career Clusters™ that are likely to experience the greatest need for cybersecurity workers, and detailed industry-validated competencies developed for specific pathways most often associated with CTE cybersecurity pathways. Statements should be reviewed regularly and revised as necessary to reflect technological advancement.

- Build in flexibility and/or exceptions in teacher certification requirements, especially for delivery of the highly technical courses in cybersecurity specific pathways programs and expand rigorous and on-going educator professional development opportunities through a variety of formats and organizations.

- The private and public sectors should emphasize and expand hands-on, experiential and **work-based learning approaches—including apprenticeships, internships, job shadowing, and virtual opportunities.**

Q & A

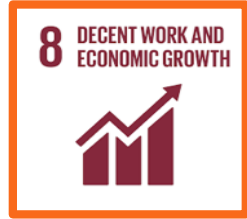**MONIQUE MILES, VICE PRESIDENT, ASPEN INSTITUTE**

ASPEN INSTITUTE FORUM FOR COMMUNITY SOLUTIONS

- **Mission:** The Aspen Institute Forum for Community Solutions promotes collaborative, community-based efforts that build the power and influence of those with the least access to opportunity. We support communities to come together to expand mobility, eliminate systemic barriers, and create their own solutions to their most pressing challenges.
- **Vision:** We envision a future where communities create their own vibrant and lasting solutions to the social and economic problems that they face. We believe that if communities have more power to lead change, we will create a more just and equitable society.

opportunity youth forum communities

- SEATTLE/SOUTH KING COUNTY, WA
- MISSOULA, MT
- MAINE, SOUTHERN RURAL
- BOSTON, MA
- FLINT, MI
- HARTFORD, CT
- DETROIT, MI
- NEW YORK, NY
- DEL NORTE COUNTY, CA
- CHICAGO, IL
- PHILADELPHIA, PA
- NEWARK, NJ
- SAN FRANCISCO, CA
- OAKLAND, CA
- DENVER, CO
- BALTIMORE, MD
- SAN JOSE / SANTA CLARA COUNTY, CA
- HOPI RESERVATION, AZ
- PUEBLO OF TAOS, NM
- PUEBLO OF JEMEZ, NM
- LOS ANGELES, CA
- PUEBLO OF LAGUNA, NM
- GREENVILLE, MS
- ATLANTA, GA
- SAN DIEGO, CA
- PHOENIX, AZ
- SAN AUGUSTINE, TX
- TUCSON, AZ
- AUSTIN, TX
- NEW ORLEANS, LA
- SAN ANTONIO, TX
- JASPER, TX
- HOUSTON, TX

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Global Opportunity Youth: A critical moment to tackle youth unemployment

SDG8: "Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all"

Increasing Pressure

- "Peak youth" -1.8 billion strong global youth population (and growing!)

- Climate change, conflict and urbanization

- Changing nature of work in the form of automation and digitization
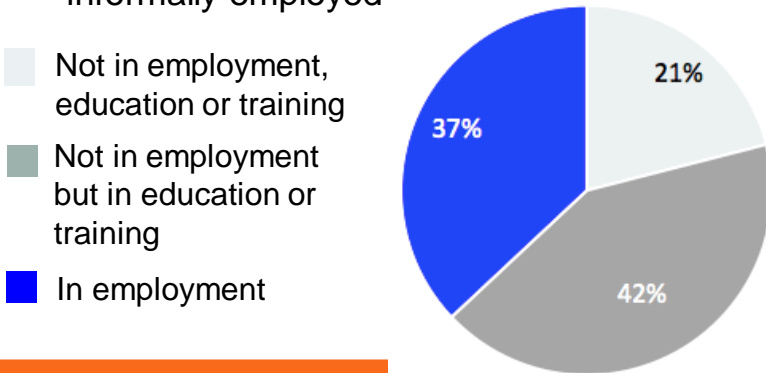
Limited scalable solutions

- Existing efforts reach a tiny fraction of total need
- Field is fragmented
- No "silver bullet"
- Young people are not partners in solution development
- Business case not well defined – unclear ROI
- Lack of local data – evidence base underdeveloped

350 million youth are not connected to education, training or formal jobs

Focus to address the challenge is on "Opportunity Youth"

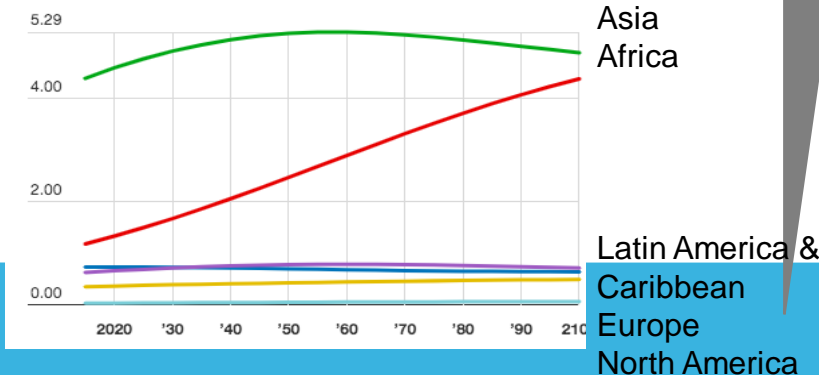## Global Youth Unemployment Characteristics

- Global youth unemployment is three times higher than adult unemployment
- 70 million youth are unemployed
- 145 million young workers are living in extreme or moderate poverty
- ~70% of those with access to work are informally employed

Legend:
- Not in employment, education or training
- Not in employment but in education or training
- In employment

Pie chart values: 21%, 42%, 37%

Global youth distribution by employment, education and training status Source: ILO Stat, 2019

Who is affected?

- 90% of global youth live in developing economies, concentrated in Sub-Saharan Africa and South Asia
- 3 in 4 unemployed youth are female
- Rural areas experience highest unemployment but urban areas host majority of total unemployed
- Vulnerable populations: migrants and refugees, youth with disabilities, ethnic and religious minorities

Chart labels: Asia, Africa, Latin America & Caribbean, Europe, North America

Y-axis: 5.29, 4.00, 2.00, 0.00
X-axis: 2020, '30, '40, '50, '60, '70, '80, '90, 210

Regional population growth, Source: UNDSA, 2015

Focus on "Opportunity Youth"

- Youth aged 15 – 29 who are not in education, employment or training (NEETS) or are informally employed
- Primary focus:
- Coming from lower socio-economic status
- First time job seekers or first-time entrepreneurs
- Transitions out of informal
- Young women

An asset-based framing that recognizes the systemic, rather than individual, nature of challenges these youth face

WHO ARE OPPORTUNITY YOUTH?

- **Nationally:**
  - The 2018 youth disconnection rate was 11.2 percent, or one in nine young people, down from 11.5 percent in 2017.
  - The country's disconnected youth are nearly twice as likely to live in poverty, more than three times as likely to have a disability of some kind, nine times as likely to have dropped out of high school, and more than twenty times as likely to be living in institutionalized group quarters as their connected counterparts.
  - Disconnected young women are over four times as likely to be mothers as their connected peers.

  ~Measure of America

WHO ARE OPPORTUNITY YOUTH?

- **Gender:**
  - Girls and young women are less likely to be disconnected than boys and young men, 10.8 percent versus 11.5 percent.
  - But the gender gap varies by race and ethnicity. For Latino and Native American youth, young women have slightly higher disconnection rates, whereas for black and white youth, young men do.

  ~Measure of America

WHO ARE OPPORTUNITY YOUTH?

- **Race and ethnicity:**
  - Native American youth have a disconnection rate of 23.4 percent, the highest of the United States' five major racial and ethnic groups.
  - Black teens and young adults have the second-highest disconnection rate at 17.4 percent:
    - followed by Latino (12.8 percent),
    - white (9.2 percent),
    - and Asian (6.2 percent) young people.

    ~ Measure of America

WHO ARE OPPORTUNITY YOUTH?

- **States:**
  - North Dakota has the lowest youth disconnection rate of any state (5.4 percent) and Alaska has the highest (18.1 percent).
  - Alaska experienced the largest increase in the share of disconnected young people between 2017 and 2018, 28.0 percent.
  - The largest drop in disconnection was achieved by Utah, from 9.6 percent in 2017 to 7.3 percent in 2018, a decrease of 24.9 percent.
  - The lowest state-level disconnection rate for young black men (Massachusetts, 11.1 percent) is still well above that same state's rate for young white men (6.0 percent).

  ~Measure of America

OPPORTUNITY YOUTH & COVID-19

- First, unemployment has skyrocketed. Between March 15 and March 28 alone, 13.2 million people filed jobless claims, an all-time record, and as of May 1, the novel coronavirus had cost more than 30 million Americans their jobs. The Congressional Budget Office predicted that the unemployment rate will soon exceed 15 percent—higher than during the Great Recession—and remain close to that until the end of 2021.

- Second, school enrollment is likely to drop. Unlike during the Great Recession, when many young people waited out the poor job market in the classroom, the coming year will see ties to the educational system unravel. Last spring, K–12 schools in all fifty states moved to distance learning. This disproportionately impacts opportunity youth.

~Measure of America

OPPORTUNITY YOUTH & COVID-19

- During and in the years following the Great Recession, the number of disconnected youth was close to six million; 14.7 percent, or about one in every seven young people, were neither working nor in school. Given the wide-ranging and catastrophic effects of the current crisis on both the economy and the educational system, we estimate that the number of disconnected youth will easily top six million and could swell to almost one-quarter of all young people, or nearly nine million teens and young adults.

- *Disconnected youth and their families will be hardest hit.*

  ~Measure of America

OPPORTUNITY YOUTH & CYBERSECURITY

- According to the agency charged with tallying statistics on the cyber talent gap, there are over 1 million unfilled cybersecurity jobs as of 2017. It is projected that this number will grow to 1.5 million by this current year (2020).

- We need to match the capacity of the growing legions of cybercriminals with an increased number of U.S. experts who serve as our most important line of defense against them.

   ~Michael Echols, CEO of the International Association of Certified ISAOs

OPPORTUNITY YOUTH & CYBERSECURITY

- It has been suggested that the next administration focus on practical strategies for assuring there are enough cybersecurity professionals to make the nation resilient.

- *Enabled people* are key to unlocking new opportunities that make the existing tools and processes more effective.

- If all existing best practices were employed we would eliminate 80% of all cyber breeches.

    ~Michael Echols, CEO of the International Association of Certified ISAOs

OPPORTUNITY YOUTH & CYBERSECURITY

- While some programming exists to support young adults to build skills in cybersecurity, including the "National Initiative for Cybersecurity Careers and Studies portal" launched as a partnership between the Department of Homeland Security and the National Institute for Standards and Technology, more can be done.

- There is a national call for the government to invest in the creation of effective pathways to employment in the cybersecurity field for Opportunity Youth, the 6 -10 million young adults in the United States who are out of school and unemployed or underemployed.

- Current approaches to addressing this talent gap fail to provide onramps for those, who often lack the resources, credential, and networks to take advantage of opportunities in this dynamic field. Without a doubt, we must integrate these overlooked young people as a part of the solution; they are this country's most tangible cybersecurity assets. We need to invest in them and can no longer waste time.

  ~ Michael Echols, CEO of the International Association of Certified ISAOs

OPPORTUNITY YOUTH & CYBERSECURITY

- Effective models for identifying high-potential young adults and preparing them for success in professional jobs exist. Year Up, for example, is a national nonprofit organization that provides marketable skills training, mentoring, and a six-month internship experience to empower opportunity youth to fulfill their career goals. YouthBuild is a similar model that achieves similar results.

- Programs like Year Up and YouthBuild (which is federally funded) are gaining traction as employers come around to the idea of tapping into previously overlooked talent pools and to the practice of considering professional competency-based certifications as an alternative to college degrees.

- The IT sector should support the expansion of such solutions to bring a new generation of driven, talented individuals to the daily cybersecurity fight and help the nation meet its growing skills shortfall.

    ~Michael Echols, CEO of the International Association of Certified ISAOs

OPPORTUNITY YOUTH & CYBERSECURITY

- Of the cybersecurity issue, President Obama said, "It's one of the most serious economic and national security challenges we face as a nation. Foreign governments, criminals, and hackers probe America's computer networks every single day."

- It's time for us to rise to this call. A solution that introduces youth to cybersecurity and provides them with real work-based experiences can both expand opportunity for our country's young people and keep our nation safe from the cybersecurity threats of today and tomorrow.

  ~Michael Echols, CEO of the International Association of Certified ISAOs

QUESTIONS?

Thank You for Joining Us!

Upcoming Webinar: "Addressing the Cybersecurity Talent Gap at Scale - Introducing Learning and Employment Records"

When: Wednesday, October 21, 2020 at 2:00pm EDT

Register: https://nist-nice.adobeconnect.com/webinaroct2020/event/registration.html

nist.gov/nice/webinars