

Pipeline Pressure: The Rising Need for Cybersecurity Educators at CAE Schools

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Faculty Supply

Cybersecurity Job Postings

- In 2023, 423 institutions sought to fill close to 865 tenure-track faculty positions in Computer Science.
- Total Security-related job postings account for 18% of total postings, which is representative of the past five years.

Cybersecurity Doctoral Candidates

- IPEDs 2022 data for the Computer and Information Systems Security/Auditing/Information Assurance Doctors degree-research show a total of **118 graduates from 7 total universities** (CIP Code 11.1003). **2,799 are reported in “Computer and Information Sciences”** (CIP Code 11.07)
- From the Taulbee Study, 4% or 79 graduates (total 1,883) report a specialty in “Security/Information Assurance.” 51 graduates went into industry. Only a small number (28) went into teaching related positions.

2025 CAE

Faculty Supply

There is an underproduction of Cybersecurity PhD's of between 2 and 10 per every PhD produced.

Community Symposium

2025 CAE

School Survey

The Cybersecurity Educators Workforce Gap Project Team developed a mixed-method survey and distributed it to approximately 450 colleges and universities in March 2024.

Key points of inquiry include current staffing levels, recruitment, strategic planning, and major obstacles pertaining to the educator workforce gap.

105 responses were received from 42 different states.

Community Symposium

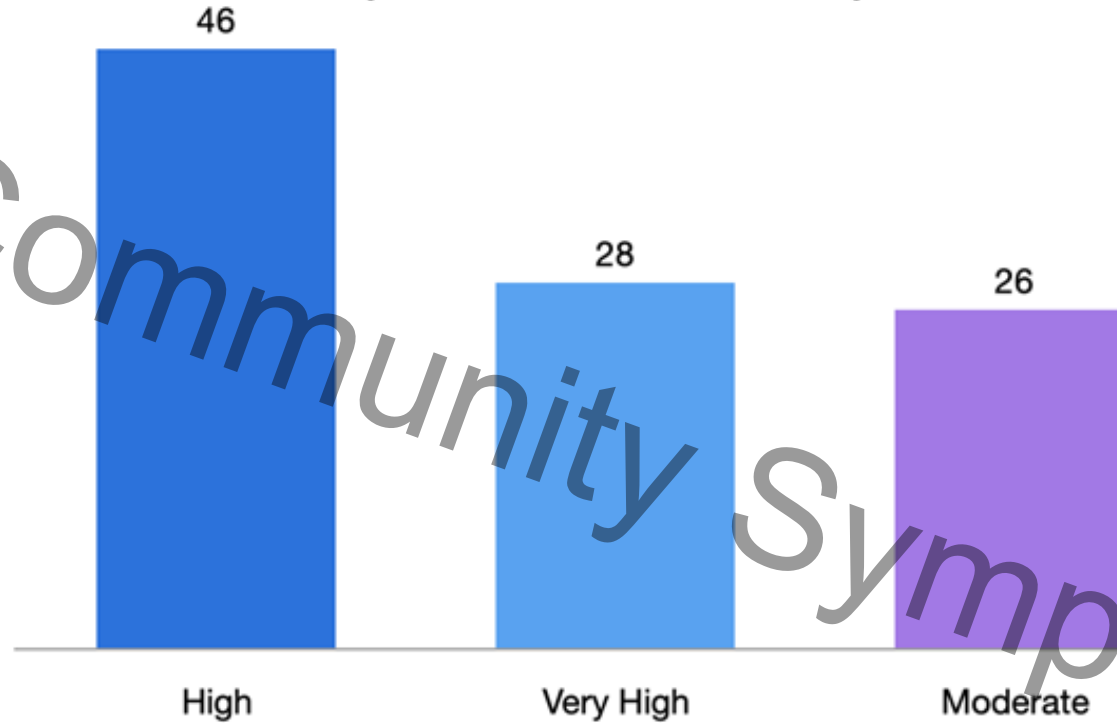


CAE
IN CYBERSECURITY
COMMUNITY

2025 CAE

School Survey

**Current Student Demand
(Number of CAE Institutions)**



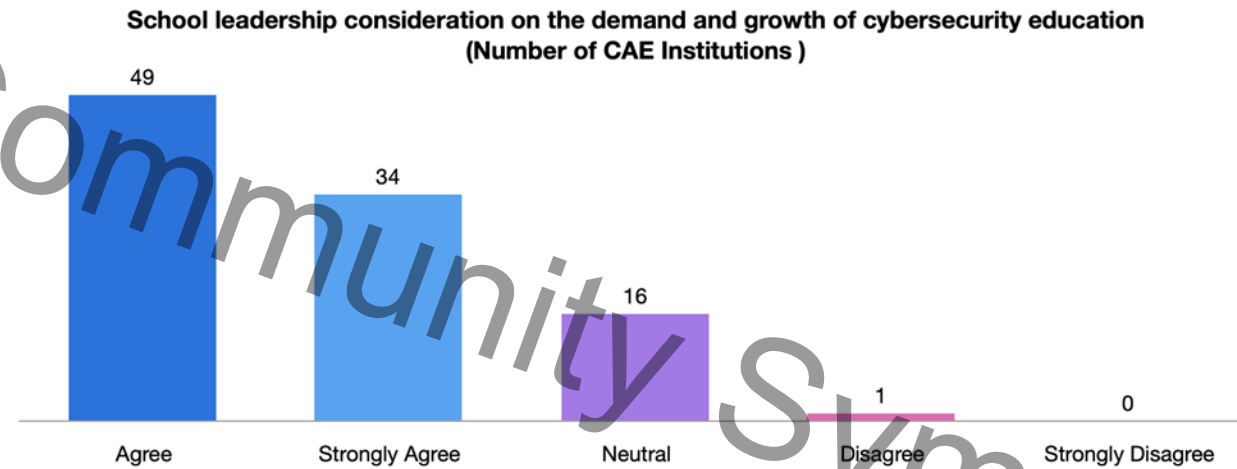
2025 CAE

School Survey



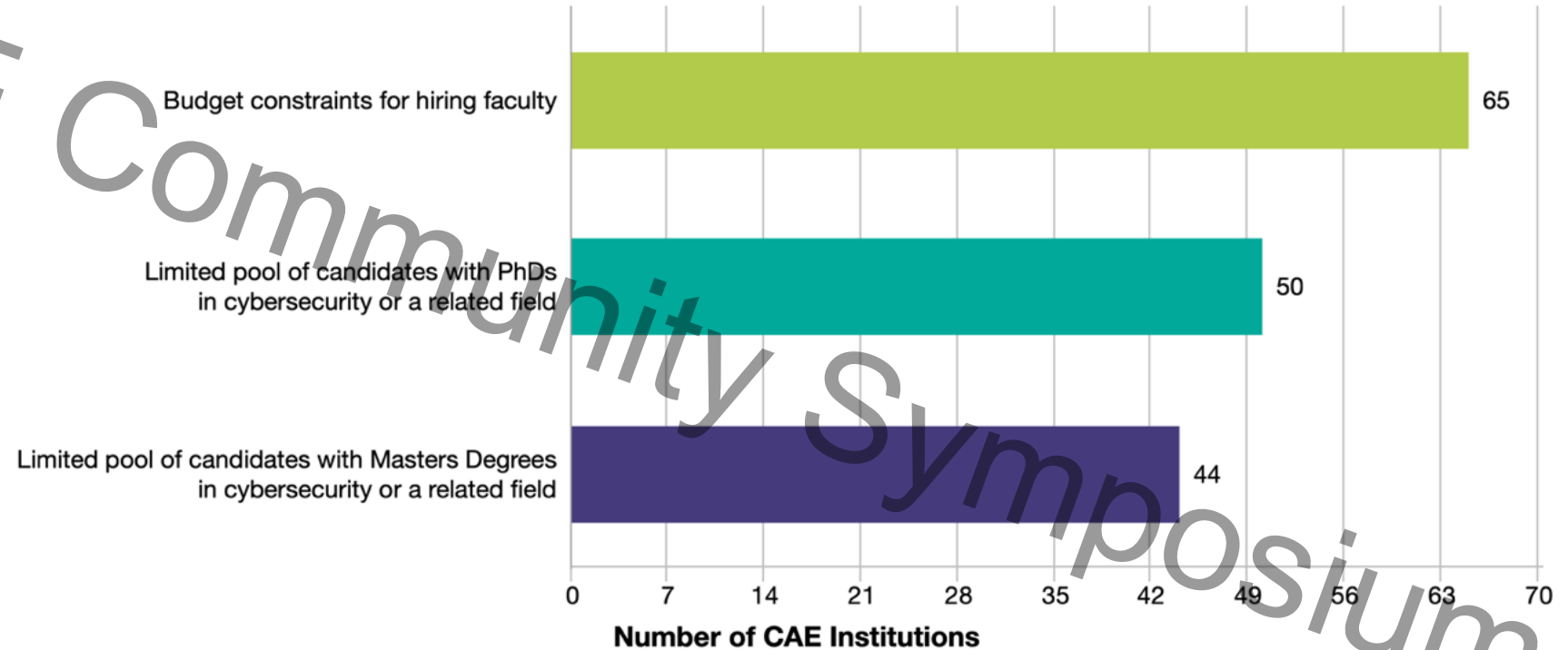
2025 CAE

School Survey



2025 CAE School Survey

Major Challenges Encountered in Recruiting and Retaining Qualified Cybersecurity Educators.



Recommendations

- An investment in this domain is part of a long-term institutional strategy.
- Must address the pay gap in this in-demand field and the rising workload on faculty and staff. Institutional leadership should engage directly to develop appropriate faculty hiring and targets and improve retention efforts.
- Consider offering more teaching faculty positions and reassess the teaching role.

Reading List

The Undergraduate Demand

- National Academies of Sciences, Engineering, and Medicine. (2018). Assessing and responding to the growth of computer science undergraduate enrollments. The National Academies Press.
<https://doi.org/10.17226/24926>
- Computing Research Association. (2023). *The CRA Taulbee Survey*.
<http://cra.org/resources/taulbee-survey/>

Current State

- Morris, M., Hammon, J., Anderson, K., Vikayanon, K., Coombs, L., Spragg, A., Giwamogorewa, O., Jirapanjavat, S., Ilges, C. (2024). *Help Wanted: Cybersecurity Educators. How NCAE institutions are responding. NICE Community Coordinating Council*.
https://www.nist.gov/system/files/documents/2024/12/19/Cybersecurity%20Educators%20Wanted%20White%20Paper%20%28December%202024%29_508complant.pdf