Testimony on HB 1398
Senate Education Committee
3.15.2023

Chair Elkin and members of the Senate Education Committee,

Governor Burgum and his administration stand in support of House Bill 1398, which prioritizes cybersecurity and computer science in our K-12 classrooms.

This administration has placed a strong emphasis on the critical importance of computer science and cybersecurity. Through the establishment of the PK-20W Initiative (https://www.ndit.nd.gov/pk-20w-initiative-computer-science-and-cyber-education), the vision of "Every Student, Every School, Cyber Educated" ensures our students have the skills and knowledge to navigate a technology-driven economy.

While this concept has undergone many iterations, the current language provides local control while ensuring our students have the choice to access a course within this critical content area. In the past two years, students have been provided computers or other technology devices to engage in learning and education. With increased access, it is critical our students learn how to navigate technology and the online world by learning foundational skills around cyber safety, such as password phrases, safe websites and verified sources just to name a few.

Computer science and cyber education also provides another avenue for students to problem-solve, analyze data and use algorithmic thinking as well as other 21st century skills. When students experience learning through real-world application, it fuels curiosity and motivates the learner to become engaged.

Not only is the learning environment demanding that students have experiences around cybersecurity and computer science, but the prevalence of technology in our daily lives has become a direct factor in employability. Employers are increasingly seeking students prepared with the skillsets to navigate tech challenges and cyberattacks and complete daily tasks using technology devices.

As the first state with cybersecurity and computer science standards, North Dakota has the unique opportunity to continue to lead and ensure our students have every chance to rise to the top. With our collective support of HB 1398, we can fulfill the vision of Every Student, Every School, Cyber Educated.

Maria Neset
Senior Policy Advisor
Office of the Governor

Additional Information

The Skills Gap is Growing:

- Predicted worldwide shortage of 3.5 million cybersecurity positions through 2025 (Cybersecurity Ventures); currently 715,348 cybersecurity openings nationwide (Cyberseek).
- Cybersecurity has a **virtually 0% unemployment rate.**
- A 2019 Presidential Executive Order calls for increased focus on enhancing the United States' cybersecurity workforce as a strategic asset to protect national security.
- North Dakota's military footprint and national leadership in energy, agriculture and unmanned aircraft systems (UAS) are key economic drivers.
- Implementing and securing 21st century technology infrastructure will enable continued growth across public and private sectors, helping attract capital and talent to the state.

Threats:

- Ransomware attacks are in the headlines daily with thousands of entities falling prey every year. School districts and government entities are prime targets for attacks.
- In the U.S., the average cost of a data breach is $4.24 million (IBM and Ponemon report, August 2021, What is the Cost of a Data Breach in 2021? | UpGuard. There is a hack every 39 seconds. - Digital Guardian Blog
- The global pandemic has increased cyberthreats due to the work-from-home shift.

Computer Science:

As a broader field directly tied to dozens of technology-centric careers including cybersecurity, in the Computer Science realm:

- 90% of parents want computer science to be taught; only 51% of schools teach it. (Code.org).
- There are more than 695,077 computing jobs open nationwide, yet there were only 79,991 computer science graduates entering the workforce last year. (Code.org).

In North Dakota:

- There are approximately 1,171 open cybersecurity jobs (Cyberseek) and 1,389 open computing jobs (ND.pdf (code.org); however, recent data shows North Dakota had only 177 computer science graduates in the state. And the actual number of open computing jobs is likely significantly higher.
- According to Code.org, the average salary for a computing occupation in North Dakota is $73,102, which is significantly higher than the average salary in the state ($48,130). Existing openings in cybersecurity and computing jobs combined represent a $168 million opportunity in terms of annual salaries.