



Washington Office of Superintendent of
PUBLIC INSTRUCTION

Computer Science Capacity

1. Purpose:

To staff and support computer science (CS) capacity and subject matter expertise at OSPI.

2. Description of services provided:

This proviso supports OSPI staffing to provide leadership, guidance, resource development, professional development, and program management which all support the achievement of state learning standards related to computer science for Washington students. Staff work with schools and districts to support the implementation of K–12 Computer Science Learning Standards, including cross-subject connections and development and/or identification of professional learning and technical assistance.

3. Criteria for receiving services and/or grants:

All schools and districts in Washington benefit from the work supporting computer science learning standards and requirements.

Beneficiaries in the 2022-23 School Year:

| | |
|------------------------------------|---|
| Number of School Districts: | All school districts statewide |
| Number of Schools: | All schools statewide |
| Number of Students: | All students statewide |
| Number of Educators: | All educators statewide |
| Other: | OSPI internal partners, AESD, PESB and other agencies as applicable, higher education institutions, professional development providers, curriculum vendors, and other external partners |

4. Are federal or other funds contingent on state funding?

No



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5. State funding history:

| Fiscal Year | Amount Funded | Actual Expenditures |
|-------------|---------------|---------------------|
| 2023 | \$117,000 | \$60,832 |
| 2022 | \$117,000 | \$112,110 |
| 2021 | \$117,000 | \$114,055 |
| 2020 | \$117,000 | \$116,000 |
| 2019 | \$117,000 | \$116,018 |

6. Number of beneficiaries (e.g., school districts, schools, students, educators, other) history:

| Fiscal Year | Number of Schools |
|-------------|-------------------|
| 2023 | 2000+ |
| 2022 | 2000+ |
| 2021 | 2000+ |
| 2020 | 2000+ |
| 2019 | 2000+ |
| 2018 | 2000+ |

7. Programmatic changes since inception (if any):

- 2016: Computer science learning standards were adopted and later revised in 2018
- 2017: CSforAll SCRIPT training to facilitate district implementation of CS coursework began and has continued annually, led by AESD
- 2019: SB 5088 requires all high school to offer a CS elective by 2022–23
- 2019: SHB 1577 requires OSPI to publish an annual data report on high school CS education
- 2020: A guidance document on CS course codes was posted
- 2022: SB 5299 allows high school CS elective to count as third year math or science credit
- 2022: The OSPI CS strategic plan was created in partnership with a large, diverse team of subject matter experts
- 2023: CS position exited, after recruitment and interview process, a new supervisor was hired.

8. Program evaluation or evaluation of major findings:

Having dedicated staffing at the state level to focus on computer science education enables the state to provide direction and leadership to support state priorities. Since the creation of this position, the number of high schools offering computer science in Washington has



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grown to offer 879 computer science courses which enrolled 30,387 students in grades 9–12 in the 2021–22 school year.

The computer science lead has produced critical documents for the vision of CS and guidance for educators, managed the state's CS grant program, collaborated with Educational Service Districts to build regional support for CS, provided technical assistance to school districts, and established and led partnerships with agents of change in CS education. In addition, the passage of SSB5088 and SB5299 have focused work on student opportunities, and the legislation for two new CS specialty endorsements managed by PESB is helping to provide teacher training and certification. Funding for the CS Education and AP CS grants has significantly increase student participation in and exposure to CS coursework as well as teacher and school capacity for offering CS.

The proviso was underspent in the 2023 FY due to vacancy savings.

9. Major challenges faced by the program:

As computer science is a more recent endeavor for the state, there is a lack of infrastructure including computer science leadership, certification programs, and understanding of programmatic needs at the district and school level. Additionally, pathways that transition people from careers in industry to roles in the classroom are less sought out due to the high pay in the technology industry. Expanding capacity for computer science in schools requires the training of current classroom teachers and coalition building between professional development providers, educational service districts, and schools.

It is well-recognized that CS professionals, CS students, as well as CS educators have historically been highly segregated along race/ethnicity, gender, and socioeconomic lines. This stems from systemic practices in the tech industry and lack of widespread exposure to CS in schools. Work in Washington must continue to address these inequities to create access to computer science professions for all.

10. Future opportunities:

As evidenced by the consistent grant applications for both the Computer Science Education and the AP Computer Science grants, districts are motivated to implement computer science programs throughout K–12. Computer occupations are projected to grow by 21%, equivalent to 18,000 annual openings, over the next ten years. The Bureau of Labor Statistics also projects strong growth and demand in IT and software development. As more students demand access to robust computer science programs, Washington state can help schools develop computer science programs with trained and certified teachers that meet the needs of our students and workforce.



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11. **Statutory and/or budget language:**

\$117,000 of the general fund—state appropriation for fiscal year 2022 and \$117,000 of the general fund—state appropriation for fiscal year 2023 are provided solely for implementation of chapter 3, Laws of 2015 1st sp. sess. (computer science).

12. **Other relevant information:**

Most of the attention regarding CS is at the high school level, as reflected in the legislation passed thus far. OSPI is guided by legislation which may be necessary for K–8 to be just as supported by this role. Computational thinking at early grade levels is beneficial to students outside of a CS context. Moreover, exposure to such concepts at a younger age helps mitigate the stereotypes perpetuated by the time students reach high school, which often prevent underrepresented students from pursuing CS coursework. Equity and diversity concerns will be more foundationally addressed long-term if elementary CS support may be better facilitated by potentially providing a means of tracking CS participation in elementary.

13. **Schools/districts receiving assistance:**

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14. **Program Contact Information:**

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