



Washington Office of Superintendent of **PUBLIC INSTRUCTION**

Computer Science Professional Development Grants

1. **Purpose:**

To facilitate meeting the mandate that by 2022–23 every high school in Washington must offer an elective computer science course, the Professional Educator Standards Board (PESB) distributed \$250,000 in funding through professional learning grants to bolster the Computer Science (CS) educator workforce. The Computer Science Professional Learning Grant supported organizations in offering professional learning (PL) opportunities to educators for CS credentialing. The Expanding CS for Elementary Educators Grant similarly funded PL for P–6 educators.

For fiscal year 2023, \$14,000 remained as carryover from the 2021–22 one-time grant funding of \$250,000. This was allocated for CS Professional Learning grantees to support the completion of their programs through the summer of 2022. While PESB has provided an extremely detailed report for the previous year, they did not complete a report this year as the vast majority of the work had been completed and funding had been spent prior to this fiscal year. The descriptions below essentially echo the existing work to outline what has been accomplished.

2. **Description of services provided:**

The funding was provided to OSPI but managed through PESB. As part of this effort, PESB developed standards for elementary and secondary CS specialty endorsements. The grant funding was then used to support teachers with costs associated with becoming certified, endorsed, or licensed in computer science, including professional development, training, costs for licensure exams, courses in pedagogy, and courses in CS content.

3. **Criteria for receiving services and/or grants:**

Computer Science Professional Learning Grant

Grantees were required to support minimally 15 educators, emphasizing participants who have been historically underrepresented in CS education. After being awarded funding, grantees were required to:

- Complete an itemized budget;
- Attend grant support meetings;
- Provide their educator participants with professional learning in computer science;
- Allow PESB staff to convene a site visit with each grantee during the grant period;



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- Present their grant project and future opportunities at the Washington Educators Computer Science Virtual Showcase hosted by PESB; and
- Complete a grant report survey, as well as ask educator participants to complete a pre- and post-survey.

Expanding Elementary CS Grant

Tribal schools, title 1 schools, and schools using funds to support P–6 students from underserved populations were strongly encouraged to apply. Video and audio applications were accepted for elementary CS to remove barriers to the traditional grant writing process. After being awarded, grantees were required to:

- Participate in virtual professional learning during spring 2022 which was provided free of charge by PESB and OSPI, and included guidance on designing computer science lessons, using purchased computer science tools and resources, and information about computer science credentialing. OSPI and ESD 101 provided free clock hours to educators for this professional learning.
- Submit a brief virtual exhibit for the convening showcasing the technology and learning resulting from their participation in the grant.
- Share at least two posts on social media during Teacher Appreciation Week (May 1 - May 7, 2022) highlighting the technology they purchased and how they've used it with students.
- Complete pre- and post-grant surveys.

Beneficiaries in the 2022-23 School Year:

Number of School Districts: 37

Number of Schools: 53

Number of Students: 12,000 (approximate)

Number of Educators: 231

Other: CS PL grantees were Citi University, ESD112, University of Washington, Western Washington University, and Whitworth University

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	\$14,000	\$13,644
2022	\$236,000	\$235,958

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

Fiscal Year	Number of Schools
FY 23	53
FY 22	53

7. Programmatic changes since inception (if any):

N/A

8. Program evaluation or evaluation of major findings:

Some major quantitative findings from the grant usage include:

- 18% of educators served were early in their career while 31% had 10+ years of experience.
- 77% of participants self-identified as women, 16% as educators of color, and 14% as multilingual.
- 76% planned to teach CS in 2022–23 (which may be confirmed in the forthcoming 2022–23 annual CS data report).
- 63% of participants were interested in obtaining CS endorsements.

Computer Science Professional Learning Grant

120 total educators participated in the CS Professional Learning grant to completion, as reported by grantees. The data below was collected from 128 educators who participated in the grant pre-survey and 63 educators who participated in the grant post-survey.

Educators indicated that they were interested in participating in the CS Professional Learning Grant for a variety of reasons, including increasing student engagement, earning STEM clock hours, personal interest, and earning an endorsement in CS.

Educators had a wide range of CS knowledge and skills before participating in CS professional learning. Before receiving professional learning, 2.5% of educators felt “very knowledgeable and skillful” in CS, 11.8% felt they had “no knowledge or skill” in CS, and the majority of educators fell in between with some knowledge of CS. By the end of the grant, more educator participants felt they had more knowledge and skill in CS with the majority of educators rating their level higher than they started and zero educators rating themselves as “no knowledge or skill”.



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Expanding Elementary CS Grant

Free CS professional learning was provided by PESB and OSPI. Nine professional learning sessions that focused on the tools and resources that grantees planned to purchase with grant funds were conducted throughout the spring. These were interactive workshops where educators could ask questions, share what they are doing in their classrooms, and gather great ideas on how to implement CS in their own contexts. Educators were also eligible to earn free clock hours for each session they attended.

Grantees used funds to purchase tools and resources to help them learn more about implementing CS in the classroom and engage students with CS. Tools and resources included programmable robots, online coding platforms, books, and hands-on coding games.

9. Major challenges faced by the program:

Short application timeline

The timeline for grant applications was relatively short which may have impacted the number of grant applications received. The grant application period began on September 9, 2021, with a kick-off webinar. The application period ended on October 4, 2021, giving applicants a little less than a month to develop a grant proposal during a very busy time for education organizations.

Educator participant recruitment and grant timeline extension

Initially, four of five grantee organizations struggled to recruit educators to participate in grant projects. This could be due to various factors, including educator burnout in the middle of the school year, effects of Covid recovery, and lack of capacity to take on new learning opportunities. In response, PESB assisted grantee organizations with advertising their professional learning opportunities with great success through GovDelivery as well as social media. Three organizations were able to recruit enough educators to fulfill minimum grant requirements, though all five organizations granted funds to support educators. The grant end date was also extended from June 30 to August 30, 2022, to accommodate grantees moving professional learning to the summer to be responsive to educator needs.

Attrition

Over the course of the grant period, a common challenge for the grantee organizations was attrition of educator participants. This was due to a number of reasons, including Covid and educators' lack of capacity for the amount of work that was required of educator participants for professional learning.

Funding

Grantees expressed the need for future funding to support additional development of CS endorsement programs. Some grantees stated that it would be beneficial to have funding for further development of professional learning modules for the endorsement they were



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developing. Other grantees found that greater funding would have allowed more educators to participate in their professional learning.

10. Future opportunities:

Since this was one-time grant funding and the carryover \$14,000 has been accounted for, no further work is planned for this funding.

11. Statutory and/or budget language:

\$236,000 of the general fund—state appropriation for fiscal year 2022 and \$14,000 of the general fund—state appropriation for fiscal year 2023 are provided solely for grants to support teachers with costs associated with becoming certified, endorsed, or licensed in computer science including, but not limited to, professional development, training, licensure exams, courses in pedagogy, and courses in computer science content. Entities eligible for these funds include, but are not limited to, individual teachers, local education agencies, approved professional learning providers, and institutions of higher education located in Washington state.

12. Other relevant information:

While this one-time funding was an excellent boost to CS education, particularly in supporting the development of the CS educator workforce, the annual OSPI CS dataset and Code.org's independent access report confirms that far more support is needed in order to reach the high school CS elective mandate. As of the latest findings in 2022, 47% of Washington high schools offer CS coursework. K–8 CS coursework data is not tracked but is presumably equal or lower. One of the major reasons for this is lack of CS educators, with higher-paying salaries in the tech industry being a primary factor preventing qualified individuals from considering CS teaching careers. Smaller schools being unable to afford a full-time CS teacher or to train teachers who already handle multiple subject areas is another major challenge.

Additionally, the CS specialty endorsement, while a valuable credential in K–8, is less valued at the high school level due to the overwhelming number of CS courses offered through CTE (over 95% of high school CS courses). As such, most job listings require a CTE certification, which may be offered conditionally, but ultimately overshadows the CS endorsement. For substantial diversification and increase in the CS educator workforce to happen, more than one-time support – financially, systemically, or otherwise – is needed.

13. Schools/districts receiving assistance:

[preliminaryfy23state-fundedprovisograntawardsupdated-42823.xlsx \(live.com\)](#)



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