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State of Minnesota

HOUSE OF REPRESENTATIVES

NINETY-THIRD SESSION

H. F. No. **759**

01/25/2023 Authored by Lee, K.; Elkins; Noor; Edelson; Bahner and others
The bill was read for the first time and referred to the Committee on Education Policy
03/06/2023 Adoption of Report: Amended and re-referred to the Committee on Education Finance

- 1.1 A bill for an act
- 1.2 relating to education; providing for computer science education advancement;
- 1.3 authorizing rulemaking; appropriating money.
- 1.4 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MINNESOTA:
- 1.5 Section 1. **COMPUTER SCIENCE EDUCATION ADVANCEMENT PROGRAM.**
- 1.6 Subdivision 1. Definitions. (a) "Computer science" means the study of computers and
- 1.7 algorithmic processes, including their principles, their hardware and software designs, their
- 1.8 implementation, and their impact on society.
- 1.9 (b) "Computer science courses and content" means courses at:
- 1.10 (1) elementary and middle schools that teach computer science as standalone
- 1.11 implementations or embedded in other subjects; and
- 1.12 (2) high schools that teach computer science as standalone courses and focus on teaching
- 1.13 students how to create new technologies.
- 1.14 (c) "High-quality computer science educator training" means activities that:
- 1.15 (1) clarify the conceptual foundations of computer science;
- 1.16 (2) teach research-based practices, including hands-on and inquiry-based learning;
- 1.17 (3) are primarily intended for existing teachers with or without prior exposure to computer
- 1.18 science with options for advanced training for teachers; and
- 1.19 (4) align to existing integrated computer science standards in Minnesota or nationally
- 1.20 recognized standards, including the Computer Science Teachers' Association's kindergarten
- 1.21 through grade 12 computer science education standards.

2.1 (d) "High-quality computer science professional learning providers" means institutions
2.2 of higher education, nonprofits, other state-funded entities, or private entities that have
2.3 successfully designed, implemented, and scaled high-quality computer science professional
2.4 learning for teachers as defined in paragraph (c).

2.5 (e) "STEAM" means science, technology, engineering, arts, and mathematics.

2.6 Subd. 2. **Computer science education supervisor.** The computer science supervisor
2.7 shall be dedicated to:

2.8 (1) the implementation of this act and the implementation of the computer science
2.9 education strategic plan developed by the working group under subdivision 3;

2.10 (2) outreach to districts that need additional supports to create or advance their computer
2.11 science programs; and

2.12 (3) supporting districts in using existing and available resources for districts to create
2.13 and advance their computer science programs.

2.14 Subd. 3. **Computer science working group.** (a) The Department of Education shall
2.15 establish a computer science education working group to develop a state strategic plan for
2.16 long-term and sustained growth of computer science education in all kindergarten through
2.17 grade 12 school districts and charter schools. The commissioner of education must appoint
2.18 members of the working group by July 1, 2023.

2.19 (b) Demographics of the working group must be inclusive and represent the diversity
2.20 of the state, including but not limited to racial, ethnic, and geographic diversity, and diversity
2.21 related to gender and sexual orientation.

2.22 (c) Public members of the advisory committee may be compensated and reimbursed for
2.23 expenses in accordance with Minnesota Statutes, section 15.059, subdivision 3.

2.24 (d) Meetings of the advisory committee are subject to the Open Meeting Law under
2.25 Minnesota Statutes, chapter 13D.

2.26 (e) The computer science education advisory committee shall consist of the following
2.27 members:

2.28 (1) one member of the house of representatives appointed by the speaker of the house
2.29 and one member appointed by the minority leader of the house;

2.30 (2) one senator appointed by the senate majority leader and one senator appointed by
2.31 the senate minority leader;

2.32 (3) one member appointed by the governor;

- 3.1 (4) the commissioner of education or the commissioner's designee;
- 3.2 (5) the commissioner of higher education or the commissioner's designee;
- 3.3 (6) one representative of the Professional Educator Licensing and Standards Board;
- 3.4 (7) one representative of the Computer Science Teachers' Association of Minnesota;
- 3.5 (8) one representative from the business community employing computer scientists or
- 3.6 technologists;
- 3.7 (9) one representative from the Minnesota Technology Association;
- 3.8 (10) one representative from a nonprofit organization working with students and teachers
- 3.9 in computer science;
- 3.10 (11) one representative from the Minnesota Association for School Administrators;
- 3.11 (12) one representative from Education Minnesota;
- 3.12 (13) one representative from the Minnesota Association of Colleges for Teacher
- 3.13 Education;
- 3.14 (14) one representative from CSforAll Minnesota;
- 3.15 (15) one licensed library media specialist; and
- 3.16 (16) one computer science teacher from the seven-county metropolitan area and one
- 3.17 computer science teacher from outside the seven-county metropolitan area.
- 3.18 (f) The computer science education working group shall develop a state strategic plan
- 3.19 for a statewide computer science education program, including the following:
- 3.20 (1) a statement of purpose that describes the objectives or goals the Department of
- 3.21 Education will accomplish by implementing a computer science education program, the
- 3.22 strategies by which those goals will be achieved, and a timeline for achieving those goals;
- 3.23 (2) a summary of the current state landscape for kindergarten through grade 12 computer
- 3.24 science education, including diversity of students taking these courses;
- 3.25 (3) the creation or expansion of flexible options to license computer science teachers,
- 3.26 which may include approval codes, technical permits, ancillary licenses, and standard
- 3.27 licenses;
- 3.28 (4) a description of how the state will support the expansion of computer science
- 3.29 education opportunities in every public school and public charter school in the state within
- 3.30 five years, with a focus on ensuring equitable access;

- 4.1 (5) identifying high-quality computer science professional learning providers for teachers;
- 4.2 (6) an ongoing evaluation process that is overseen by the Department of Education;
- 4.3 (7) proposed rules that incorporate the principles of the state strategic plan into the state's
- 4.4 public education system as a whole;
- 4.5 (8) recommendations for long-term expansion and sustainability of computer science
- 4.6 education, including:
- 4.7 (i) implementation of a requirement that every kindergarten through grade 12 public
- 4.8 school and public charter school employs at least one certified or endorsed computer science
- 4.9 teacher, which may be met through multiple approved processes for certification and
- 4.10 endorsement, including but not limited to endorsing a certified teacher as determined by
- 4.11 the Professional Educator Licensing and Standards Board endorsed in another subject area;
- 4.12 (ii) expansion of a high school credit equivalency for computer science;
- 4.13 (iii) a recommendation on whether a foundational computer science course should be a
- 4.14 requirement to graduate high school;
- 4.15 (iv) the development of standalone kindergarten through grade 12 standards for computer
- 4.16 science; and
- 4.17 (v) training preservice teachers in computer science education; and
- 4.18 (9) a description of existing gaps in computer science education access, participation,
- 4.19 and success by geography and subgroup of students and a description of how to equitably
- 4.20 address these gaps.
- 4.21 (g) By December 31, 2023, the Department of Education shall publish the proposed
- 4.22 state strategic plan for public feedback.
- 4.23 (h) By February 28, 2024, the Department of Education shall present the adopted state
- 4.24 strategic plan described in paragraph (c) to the chairs of the legislative committees with
- 4.25 jurisdiction over education.
- 4.26 (i) The commissioner of education, or the commissioner of education's designee, may
- 4.27 approve updates and changes to the state strategic plan described in paragraph (c) as necessary
- 4.28 for the successful implementation of kindergarten through grade 12 computer science
- 4.29 education.
- 4.30 (j) The Department of Education shall update the legislative committees with jurisdiction
- 4.31 over education on all changes to the strategic plan described in paragraph (c) approved by

5.1 the commissioner of education's designee since the last presentation to each respective
5.2 entity.

5.3 (k) The computer science education advisory committee expires on February 28, 2024.
5.4 The committee may remain operational for an additional two years at the discretion of the
5.5 commissioner of education.

5.6 **Subd. 4. Computer science educator training and capacity building.** (a) The
5.7 Department of Education will develop and implement, or award grants or subcontract with
5.8 eligible entities, for the development and implementation of high-quality, coordinated
5.9 teacher recruitment and educator training programs for computer science courses and content
5.10 as defined in subdivision 1 and aligned to the state strategic plan as developed under
5.11 subdivision 3.

5.12 (b) For the purposes of this subdivision, eligible entities include:

5.13 (1) a consortium of local educational agencies in the state; and

5.14 (2) high-quality computer science professional learning providers, including institutions
5.15 of higher education in the state that are reasonably accessible geographically to all Minnesota
5.16 educators, nonprofits, other state-funded entities, or private entities working in partnership
5.17 with a consortium of local educational agencies.

5.18 (c) For purposes of this subdivision, eligible uses of funding include:

5.19 (1) high-quality professional learning opportunities for kindergarten through grade 12
5.20 computer science content that:

5.21 (i) are created and delivered in a consistent manner across the state;

5.22 (ii) are made available with no out-of-pocket expenses to educators, including teachers,
5.23 counselors, administrators, and other district employees as approved by the Department of
5.24 Education, schools, and school districts;

5.25 (iii) are made available asynchronously online, in person, and online or hybrid as
5.26 determined appropriate by the Department of Education; and

5.27 (iv) include introductory, intermediate, and advanced trainings aligned to the kindergarten
5.28 through grade 12 academic standards or, as necessary, other standards approved by the
5.29 Department of Education, specified for each of the grade bands kindergarten through grade
5.30 2, grades 3 to 5, grades 6 to 8, and grades 9 to 12;

6.1 (2) professional learning opportunities for educators of students in grades 9 to 12 may
6.2 also include trainings for Advanced Placement, International Baccalaureate, and current
6.3 enrollment credit computer science courses;

6.4 (3) travel expenses for kindergarten through grade 12 computer science teachers:

6.5 (i) for attending training opportunities under clauses (1) and (2); and

6.6 (ii) deemed appropriate and approved by the commissioner of education, or the
6.7 commissioner of education's designee;

6.8 (4) any future credentialing for kindergarten through grade 12 computer science teachers,
6.9 including Career and Technical Education and academic endorsements;

6.10 (5) supports for kindergarten through grade 12 computer science professional learning,
6.11 including mentoring and coaching;

6.12 (6) creation and deployment of resources to promote training opportunities and
6.13 recruitment of kindergarten through grade 12 computer science teachers;

6.14 (7) creation or purchase of resources to support implementation approved by the
6.15 commissioner of education or the commissioner of education's designee;

6.16 (8) creation and deployment of resources to promote learning opportunities or recruit
6.17 students to engage in the learning opportunities;

6.18 (9) development of teacher credentialing programs;

6.19 (10) planning for districts to implement or expand computer science education
6.20 opportunities; and

6.21 (11) employ, or grant for employment of, personnel or contractors to oversee the statewide
6.22 initiative, develop programs and trainings, and deliver training opportunities under clause
6.23 (1).

6.24 (d) As a condition of receiving any funding through grants or subcontracts, eligible
6.25 entities must submit an application to the Department of Education. The application must,
6.26 at a minimum, address how the entity will:

6.27 (1) reach new and existing teachers with little to no computer science background;

6.28 (2) attract and support educators from schools that currently do not have established
6.29 computer science education programs;

6.30 (3) use research- or evidence-based practices for high-quality professional development;

6.31 (4) focus the professional learning on the conceptual foundations of computer science;

7.1 (5) reach and support subgroups underrepresented in computer science;

7.2 (6) provide teachers with concrete experience through hands-on, inquiry-based practices;

7.3 (7) accommodate the particular teacher and students needs in each district and school;

7.4 and

7.5 (8) ensure that participating districts begin offering courses or content within the same

7.6 or subsequent school year after the teacher receives the professional learning.

7.7 (e) The Department of Education shall prioritize the following applications:

7.8 (1) consortiums of local educational agencies that are working in partnership with
7.9 providers of high-quality professional learning for kindergarten through grade 12 computer
7.10 science;

7.11 (2) proposals that describe strategies to increase enrollment overall, including but not
7.12 limited to subgroups of students that are traditionally underrepresented in computer science;

7.13 and

7.14 (3) proposals from rural or urban areas with a low penetration of kindergarten through
7.15 grade 12 computer science offerings, including local education consortiums within these
7.16 areas.

7.17 (f) The award recipient shall report, for all funding received under this act annually, at
7.18 a minimum:

7.19 (1) the number of teachers:

7.20 (i) trained within each of elementary, middle, and high school;

7.21 (ii) trained within trainings offered as outlined in paragraph (c), clause (1), item (iv);

7.22 and

7.23 (iii) trainings offered in Advanced Placement, International Baccalaureate, and concurrent
7.24 enrollment credit computer science courses; and

7.25 (2) the number of teachers, and percentage of teachers trained, that started implementing
7.26 computer science courses limited to middle and high school implementation.

7.27 (g) The Department of Education shall make these reports public. The publicly released
7.28 data shall not include student-level personally identifiable information.

7.29 Subd. 5. Incentives for teacher preparation. On and after July 1, 2027, any program
7.30 of teacher preparation leading to professional certification shall include, as part of the

8.1 curriculum, instruction in computer science as applied to student learning and classroom
8.2 instruction that are grade-level and subject-area appropriate.

8.3 Subd. 6. **Computer science education data collection.** (a) The Department of Education
8.4 shall require all high schools to report data and information about computer science course
8.5 offerings and enrollment.

8.6 (b) The Department of Education shall develop a plan for the secure and regular reporting
8.7 of computer science course offerings and enrollment data from schools with kindergarten
8.8 to grade 8 bands within 90 days of enactment of this act.

8.9 (c) Data collected in processes described in paragraphs (a) and (b) should be disaggregated
8.10 by gender, race, ethnicity, free and reduced-price lunch status, Individuals with Disabilities
8.11 Education Act status, 504 status, and English language learner status.

8.12 Subd. 7. **Adoption of rules.** The Department of Education and Professional Educator
8.13 Standards and Licensing Board may adopt rules to administer the computer science education
8.14 advancement fund, including rules for flexible options to license computer science teachers,
8.15 approval codes, technical permits, ancillary licenses, and standard licenses.

8.16 Sec. 2. **APPROPRIATION.**

8.17 Subdivision 1. **Department of Education.** The sums indicated in this section are
8.18 appropriated from the general fund to the Department of Education in the fiscal years
8.19 designated.

8.20 Subd. 2. **STEAM grants.** (a) For grants to STEAM-focused programs that work directly
8.21 with students providing additional STEAM education through after-school programming
8.22 or new in-school programs:

8.23 \$ 4,000,000 2024

8.24 \$ 4,000,000 2025

8.25 (b) Eligible grant recipients are schools and school districts or nonprofits that are currently
8.26 offering computer science courses or STEAM-focused programming for kindergarten to
8.27 grade 12 students in after-school programs. Preference must be given to programs serving
8.28 high free and reduced-priced lunch populations, students from Tribal Nations, or programs
8.29 in schools or districts receiving sparsity revenue under Minnesota Statutes, section 126C.10.

8.30 (c) Grant awards to nonprofits must not exceed \$125,000 per recipient.

8.31 (d) At the conclusion of the grant, recipients should submit to the commissioner of
8.32 education student enrollment data disaggregated by gender, race, ethnicity, free and

9.1 reduced-price lunch status, Individuals with Disabilities Education Act status, 504 status,
9.2 and English language learner status.

9.3 (e) Any balance in the first year does not cancel and is available in the second year.

9.4 Subd. 3. Computer science education advancement. (a) For computer science
9.5 advancement:

9.6 \$ 4,000,000 2024

9.7 \$ 4,000,000 2025

9.8 (b) Eligible uses of the appropriation include expenses related to the implementation of
9.9 section 1 and expenses related to the development, advancement, and promotion of
9.10 kindergarten through grade 12 computer science education.

9.11 (c) Any balance in the first year does not cancel and is available in the second year.

9.12 (d) The base appropriation for fiscal year 2026 and later is \$4,000,000.

9.13 **EFFECTIVE DATE.** This section is effective the day following final enactment.