HOUSE OF REPRESENTATIVES STAFF ANALYSIS

BILL #: PCS for HB 483   Education
SPONSOR(S): Choice & Innovation Subcommittee
TIED BILLS: None. **IDEN./SIM. BILLS:**   SB 1344

REFERENCE	ACTION	ANALYST	STAFF DIRECTOR or BUDGET/POLICY CHIEF
Orig. Comm.: Choice & Innovation Subcommittee		Dixon	Sleap

SUMMARY ANALYSIS

The bill establishes the Artificial Intelligence in Education Task Force (task force), within the Department of Education (DOE) to evaluate the current state of artificial intelligence (AI) technology and its potential applications in K-12 and higher education and assess the ethical, legal, and data privacy implications of AI usage in education.

The bill requires the Commissioner of Education to serve as the chair of the task force, and the Governor will appoint members with expertise in various fields relevant to education, technology, AI, ethics, data privacy, industry demands, state and local policy, and procurement. The task force must include representatives from school boards, superintendents, faculty, and teachers.

The bill requires the task force to meet, beginning in January 2025, at least four times per year and to complete its work within one year. Upon completion, the task force must submit recommendations to the Governor, the President of the Senate, and the Speaker of the House of Representatives.

Additionally, the bill requires the DOE to adopt and publish a strategic plan for a statewide computer science education program by February 28, 2026. The bill requires the strategic plan, to among other things, include a timeline for implementing objectives or goals in the plan, a summary of the current K-12 computer science state landscape, a plan for expanding flexible options to license computer science teachers, and a plan for expanding computer science education opportunities to every school in the state.

The bill may have a fiscal impact to the state. *See* Fiscal Comments.

The bill has an effective date of July, 1, 2024.

FULL ANALYSIS

I. SUBSTANTIVE ANALYSIS

A. EFFECT OF PROPOSED CHANGES:

Present Situation

<u>Computer Science Courses and Instruction</u>

Florida law defines computer science as the study of computers and algorithmic processes, including their principles, hardware and software designs, applications, and their impact on society.[1] Computer science also includes computer coding and computer programming.

Computer science is a foundational subject for students' education and their future careers and interest. It necessitates the development of robust computational thinking skills, that extend beyond the fields of science, technology, engineering, and mathematics to encompass the arts and humanities.[2]

Computational thinking refers to the thought processes involved in expressing solutions as computational steps or algorithms that can be carried out by a computer. This problem-solving process, although commonly associated with computer science, is versatile and finds intentional connections across multiple educational disciplines within the classroom settings.[3]

Florida public schools are required to provide students in grades K-12 opportunities for learning computer science including computer coding and computer programing.[4] Opportunities for computer science learning may include:[5]
- instruction on computer coding in elementary and middle school;
- instruction to develop computer usage and digital literacy skills in middle school; and
- must include courses in computer science in middle and high school, including earning related industry certifications.

Elementary and middle schools may establish digital classrooms in which students are provided opportunities to improve digital literacy and competency; to learn digital skills, such a coding, multiple media presentation, and the manipulation of multiple digital graphic images. Students may also have the opportunity to earn digital tool certificates and certifications.[6]

Computer science courses must be offered to students in high school, including opportunities to earn industry certifications to satisfy high school graduation requirements.[7] Computer science courses and technology-related industry certifications that are identified as meeting mathematics or science requirements for high school graduation must be included in the Course Code Directory (CCD).[8] There

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[1] Section 1007.2616(1), F.S.

[2] K-12 Computer Instructional Framework Steering Committee, *K-12 Computer Science Framework*, *available at* https://k12cs.org/wp-content/uploads/2016/09/K%E2%80%9312-Computer-Science-Framework-handout-one-page.pdf.; *see also* K12 CS, *K-12 Computer Science Framework,* https://k12cs.org/ (last visited Jan. 26, 2024). The K-12 Computer Instructional Framework Steering Committee consists of the Association for Computing Machinery, Code.org, Computer Science Teachers Association, Cyber Innovation Center, National Math and Science Initiative.

[3] K-12 Computer Instruction Framework Steering Committee, *K-12 Computer Instructional Framework*, at 68, 69, and 127, *available at* https://k12cs.org/wp-content/uploads/2016/09/K%E2%80%9312-Computer-Science-Framework.pdf.

[4] Section 1007.2616(2)(a), F.S.

[5] *Id*.

[6] Section 1007.2616(5), F.S.; *see* s. 1003.4203, F.S.

[7] Section 1007.2616(6), F.S.; *see* s. 1003.4282(3), F.S.

[8] Section 1007.2616(2)(b) and (6), F.S.; *see also* Florida Department of Education, *2023-2024 Course Directory*, *https://www.flrules.org/Gateway/reference.asp?No=Ref-15909*. The Course Code Directory (CCD) lists all public pre-K-12 and postsecondary career and technical education courses available for use by school districts. Programs and courses funded through the Florida Education Finance Program and courses or programs for which students may earn credit toward high school graduation must be listed in the CCD. The CCD maintains course listings for administration and service assignments, K-12 education, exceptional student education, career and technical education, and adult

are 72 middle and high school, as well as two elementary school, computer science courses currently identified in the CCD.[9]

The Florida Virtual School (FLVS) must offer computer science courses identified in the CCD. If a school district does not offer an identified course, the district must provide students access to the course through FLVS or through other means.[10]

Classroom Teacher Bonuses and Training

Subject to legislative appropriation, a classroom teacher who was evaluated as effective or highly effective in the previous school year or who is newly hired by the school board and has not been evaluated, must receive a bonus as follows:

- If the classroom teacher holds an educator certificate in computer science or if he or she has passed the computer science subject area examination and holds an adjunct certificate, the teacher must receive a bonus of $1,000 after each year the teacher completes teaching a computer science course identified in the CCD at a public middle or high school, for up to three years.[11]
- If the classroom teacher holds an industry certification associated with a course identified in the CCD, the teacher will receive a bonus of $500 after each year the teacher completes teaching the course at a public middle or high school, for up to three years.[12]

Additionally, subject to legislative appropriation, a school district or a consortium of school districts may apply to the Department of Education (DOE) for funding to deliver or facilitate training sessions for classroom teachers in obtaining either an educator certificate in computer science, an industry certification associated with an identified course, or for professional development providing instruction in computer science courses and content. The funding may only be used to provide training for classroom teachers and to pay fees for examinations that lead to a qualifying credential, or to provide professional development.[13]

Artificial Intelligence

Artificial intelligence (AI) is the theory and development of computer systems capable of performing tasks that historically required human intelligence, such as recognizing speech, making decisions, and identifying patterns. Some of the most common examples of AI in use today include chatbots like ChatGPT, recommendation systems used in streaming platforms such as Netflix, and self-driving vehicles, such as Tesla.[14]

The Use of AI in Education

Artificial intelligence (AI) has the potential to improve K-12 education in the United States. For students, AI can provide them a personalized learning experience tailored to their individual preferences and needs, immediate feedback on their work and answers to their questions, and increased access to tutoring and other educational materials. For teachers, it can help automate some of their workload, design better interventions, and reduce burnout. And for administrators, AI can monitor the student body and provide preemptive interventions with the help of predictive analytics. But while there are many benefits to AI in schools, there are a number of technical, operational, and social challenges that limit AI-driven innovation in the education sector.[15]

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[9] *Id*.

[10] Section 1007.2616(3), F.S.

[11] Section 1007.2616(7)(a), F.S.

[12] Section 1007.2616(7)(b), F.S.

[13] Section 1007.2616(4)(a), F.S.

[14] Coursera, *What is Artificial Intelligence? Definitions, Uses, and Types*, https://www.coursera.org/articles/what-is-artificial-intelligence (last visited Jan. 26, 2024).

[15] Gillian Diebol and Chelsea Han, *How AI Can Improve K-12 Education in the United States* (April 2020), available at https://www2.datainnovation.org/2022-ai-education.pdf.

The recent surge in the use of generative AI applications has prompted discussions about the role of this technology in the field of education. In fall 2022, the White House Office of Science and Technology announced[16] a series of steps to address the rise of AI-driven tools across a variety of sectors.[17] The United States Department of Education (USDOE) was charged with developing guidance and recommendations for the use of AI in teaching and learning. The USDOE published the report[18] in May 2023 with guidance and recommendations focused on the use of AI to:[19]
- leverage automation;
- support education systems, teachers, and classroom planning;
- interrogate data and examine inequities; and
- protect student privacy and assess student learning.

The report notes several desired national research and design (R&D) objectives, such as, "creating and studying effective programs for AI literacy for students, teachers and educational constituents in general, including literacy with regard to the ethics and equity issues specific to AI in educational settings."[20]

A few states are in the early stages of developing policies and guidance related to AI in education.[21] In January 2024, the North Carolina Department of Public Instruction became the fourth state education department to issue guidance to its schools on the use of AI technology.[22] Executive orders have been signed by the Governors in seven states[23] to establish task forces to recommend or establish standards and policies regarding the use of AI in education.[24]

Effect of Proposed Changes

The bill establishes the Artificial Intelligence in Education Task Force (task force), within the Department of Education (DOE). The purpose of the task force is to:
- Evaluate the potential applications of artificial intelligence (AI) in K-12 and higher education.
- Develop policy recommendations for responsible and effective uses of AI by students and educators.
- Create a definition for the term "artificial intelligence".
- Identify workforce needs related to AI, computational thinking, and computer science.
- Provide policy recommendations to ensure that the state develops education and workforce training programs that align with changing industry needs.

The bill defines the following terms:
- "Computational thinking" to mean the thought process involved in expressing solutions as computational steps or algorithms that can be carried out by a computer.
- "Computer science" to mean the study of computers and algorithmic processes, including their principles, hardware and software designs, applications, implementation, and impact on society,

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[16] The White House, *Fact Sheet: Biden-Harris Administration Announces Key Actions to Advance Tech Accountability and Protect the Rights of the American Public*, https://www.whitehouse.gov/ostp/news-updates/2022/10/04/fact-sheet-biden-harris-administration-announces-key-actions-to-advance-tech-accountability-and-protect-the-rights-of-the-american-public/ (last visited Jan. 26, 2024).

[17] Education Commission of the States, *State Information Request AI Regulation Policies* (Dec. 12 2023), *available at* https://www.ecs.org/wp-content/uploads/State-Information-Request_AI-Regulation-Policies.pdf.

[18] United States Department of Education, Office of Educational Technology, *Artificial Intelligence and the Future of Teaching and Learning: Insights and Recommendations* (May 2023), *available at* https://www2.ed.gov/documents/ai-report/ai-report.pdf.

[19] *Id.*, at 5.

[20] *Id.*, at 51.

[21] Education Commission of the States, *State Information Request AI Regulation Policies* (Dec. 12 2023), *available at* https://www.ecs.org/wp-content/uploads/State-Information-Request_AI-Regulation-Policies.pdf.

[22] EdNC, *N.C. DPI releases guidebook on the use of AI in schools*, https://www.ednc.org/n-c-dpi-releases-guidebook-on-the-use-of-ai-in-schools/ (last visited Jan. 26, 2024).

[23] *See* Education Commission of the State; *supra* note 21. The seven states are California, New Jersey, Oklahoma, Oregon, Pennsylvania, Virginia, and Wisconsin.

[24] *Id.*

and includes computer coding, computer programming, computational thinking, robotics, cybersecurity, artificial intelligence, machine learning, computer networking, and physical computing.

The bill establishes the Commissioner of Education as the chair of the task force. Other member of the task force must be appointed by the Governor by October 1, 2024. The members must include, at a minimum:

- A representative from the State Board of Education;
- A representative from the Board of Governors;
- A representative of the State Workforce Development Board;
- A representative from the Division of State Purchasing within the Department of Management Services with expertise in technology procurement and data privacy standards;
- A representative from the Office of the Attorney General;
- One school board member and one district school superintendent, each representing a rural school district, a suburban school district, and an urban school district, respectively;
- A school district educational technology director;
- Faculty in this state with expertise on AI, educational technology, or ethics from a public college, a private college, and a community or technical college, respectively;
- Educators from one public school, one public charter school, and one private school in this state; and
- Leaders from three industry sectors in this state directly affected by developments in AI.

The bill requires the task force to meet at least four times per year beginning January 1, 2025, and to complete its work within one year. Upon completion, the task force must submit recommendations to the Governor, the President of the Senate, and the Speaker of the House of Representatives. The bill specifies that all meetings must be open to the public.

The bill specifies that the DOE must provide administrative support for the task force, including, but not limited to, developing agendas, coordinating meetings, and drafting reports for task force feedback.

The bill requires the task force to do all of the following:

- Evaluate the current state of AI technology and its potential applications in K-12 and higher education.
- Assess the ethical, legal, and data privacy implications of AI usage in education.

Additionally, the bill requires the DOE to adopt and publish a strategic plan for a statewide computer science education program by February 28, 2026, which must include, at a minimum, all of the following:

- A statement of purpose describing the objectives or goals the DOE will accomplish by implementing a computer science education program, the strategies by which those goals will be achieved, and a timeline for achieving them.
- A summary of the current state landscape for K-12 computer science education, including the diversity of students taking these courses.
- A plan for expanding flexible options to license computer science teachers, which may include approval codes technical permits, ancillary licenses, and standard licenses.
- A plan for expanding computer science education opportunities to every school in the state by the timeline established within the statement of purpose.
- A plan for defining high-quality professional learning for teachers to begin teaching computer science.
- An ongoing evaluation process that is overseen by the DOE.
- Proposed rules that incorporate the principles of the strategic plan into the state's public education system as a whole.
- A recommended long-term plan for implementing a requirement that every K-12 public school and public charter school employ at least one certified or endorsed computer science teacher or one career and technical education teacher trained in computer science. The plan must allow for the requirement to be satisfied through multiple DOE approved processes for certification

and endorsement, including, but not limited to, endorsing a certified teacher endorsed in another subject area.
- A plan to ensure long-term sustainability.

The bill requires the SBE to adopt rules regarding the AI task force and strategic plan provisions created in the bill.

B. SECTION DIRECTORY:

Section 1: Creates s. 1003.4202, F.S., creating the AI in Education Task Force within the Department of Education; providing the purpose of the task force; defining terms; requiring the Commissioner of Education to serve as the chair of the task force; requiring the department to provide certain administrative support to the task force; requiring the Governor to appoint members to the task force by a specified date; requiring the task force to meet a certain number of times per year; providing the duties of the task force; requiring the department to adopt and publish by a specified date a strategic plan for computer science education; providing requirements for the strategic plan; requiring the State Board of Education to adopt rules.

Section 2: Establishes an effective date.

II. FISCAL ANALYSIS & ECONOMIC IMPACT STATEMENT

A. FISCAL IMPACT ON STATE GOVERNMENT:

1. Revenues:

None.

2. Expenditures:

See Fiscal Comments.

B. FISCAL IMPACT ON LOCAL GOVERNMENTS:

1. Revenues:

None

2. Expenditures:

None.

C. DIRECT ECONOMIC IMPACT ON PRIVATE SECTOR:

None.

D. FISCAL COMMENTS:

The Department of Education may incur costs associated with providing administrative support for the Artificial Intelligence Task Force, to include drafting reports for task force feedback.

III. COMMENTS

A. CONSTITUTIONAL ISSUES:

1. Applicability of Municipality/County Mandates Provision:

None.

2. Other:

None.

B. RULE-MAKING AUTHORITY:

This bill requires the State Board of Education to adopt rules for the AI Education Task Force and the adoption of a statewide computer science education program strategic plan.

C. DRAFTING ISSUES OR OTHER COMMENTS:

None.

IV. AMENDMENTS/COMMITTEE SUBSTITUTE CHANGES

Not applicable.