

118TH CONGRESS
2D SESSION

S. 5031

To promote a 21st century artificial intelligence workforce and to authorize the Secretary of Education to carry out a program to increase access to prekindergarten through grade 12 emerging and advanced technology education and upskill workers in the technology of the future.

IN THE SENATE OF THE UNITED STATES

SEPTEMBER 12, 2024

Ms. BUTLER (for herself and Ms. HIRONO) introduced the following bill; which was read twice and referred to the Committee on Health, Education, Labor, and Pensions

A BILL

To promote a 21st century artificial intelligence workforce and to authorize the Secretary of Education to carry out a program to increase access to prekindergarten through grade 12 emerging and advanced technology education and upskill workers in the technology of the future.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Workforce of the Fu-
5 ture Act of 2024”.

1 **SEC. 2. TABLE OF CONTENTS.**

2 The table of contents for this Act is as follows:

Sec. 1. Short title.

Sec. 2. Table of contents.

TITLE I—IMPACT OF ARTIFICIAL INTELLIGENCE ON JOBS

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AND WORKFORCE DEVELOPMENT

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Sec. 206. Amendments to other laws.

3 **TITLE I—IMPACT OF ARTIFICIAL**
4 **INTELLIGENCE ON JOBS**

5 **SEC. 101. SENSE OF CONGRESS.**

6 It is the sense of Congress that—

7 (1) while the field of artificial intelligence is
8 evolving quickly and has potential to disrupt jobs,
9 there are opportunities to prepare the American
10 workforce to develop and work alongside this new
11 technology and mitigate the potential negative con-
12 sequences of job displacement; and

13 (2) to ensure these opportunities, it is impera-
14 tive to identify the following:

15 (A) Data and data access necessary to
16 properly analyze the impact of artificial intel-
17 ligence on the United States workforce.

1 (B) Industries projected to be most im-
2 pacted by artificial intelligence.

3 (C) Opportunities for workers and other
4 stakeholders to influence the impact of artificial
5 intelligence across industries.

6 (D) Characteristics of workers and commu-
7 nities whose career opportunities are most likely
8 to be affected by the growth of artificial intel-
9 ligence.

10 (E) The skills, expertise, and education
11 needed to develop, operate, or work alongside
12 artificial intelligence.

13 (F) Methods to ensure necessary skills, ex-
14 pertise, and education are accessible to all seg-
15 ments of the current and future workforce.

16 **SEC. 102. DEFINITIONS.**

17 In this title:

18 (1) **ARTIFICIAL INTELLIGENCE.**—The term “ar-
19 tificial intelligence” has the meaning given the term
20 in section 5002 of the National Artificial Intelligence
21 Initiative Act of 2020 (15 U.S.C. 9401).

22 (2) **COMMUNITY COLLEGE.**—The term “commu-
23 nity college” has the meaning given the term “junior
24 or community college” in section 312(f) of the High-
25 er Education Act of 1965 (20 U.S.C. 1058(f)).

1 (3) INSTITUTION OF HIGHER EDUCATION.—The
2 term “institution of higher education” has the
3 meaning given the term in section 101 of the Higher
4 Education Act of 1965 (20 U.S.C. 1001).

5 (4) LOCAL EDUCATIONAL AGENCY.—The term
6 “local educational agency” has the meaning given
7 the term in section 8101 of the Elementary and Sec-
8 ondary Education Act of 1965 (20 U.S.C. 7801).

9 (5) MINORITY-SERVING INSTITUTION.—The
10 term “minority-serving institution” means an eligi-
11 ble institution as described in section 371 of the
12 Higher Education Act of 1965 (20 U.S.C. 1067q).

13 (6) STATE EDUCATIONAL AGENCY.—The term
14 “State educational agency” has the meaning given
15 the term in section 8101 of the Elementary and Sec-
16 ondary Education Act of 1965 (20 U.S.C. 7801).

17 (7) TECHNICAL COLLEGE.—The term “tech-
18 nical college” means a postsecondary vocational in-
19 stitution, as that term is defined in section 102(c)
20 of the Higher Education Act of 1965 (20 U.S.C.
21 1002(c)).

22 (8) TRIBAL COLLEGE OR UNIVERSITY.—The
23 term “Tribal College or University” has the meaning
24 given the term in section 316 of the Higher Edu-
25 cation Act of 1965 (20 U.S.C. 1059c).

1 **SEC. 103. REPORT ON ARTIFICIAL INTELLIGENCE.**

2 (a) IN GENERAL.—

3 (1) INTERIM AND FINAL REPORTS.—The Sec-
4 retary of Labor, the Director of the National Science
5 Foundation, and the Secretary of Education shall,
6 jointly and in collaboration with the individuals and
7 entities described in subsection (c), prepare and sub-
8 mit to the Committee on Education and the Work-
9 force and the Committee on Science, Space, and
10 Technology of the House of Representatives, and the
11 Committee on Health, Education, Labor, and Pen-
12 sions and the Committee on Commerce, Science, and
13 Transportation of the Senate—

14 (A) not later 1 year after the date of en-
15 actment of this Act, an interim report on artifi-
16 cial intelligence and its impact on the workforce
17 of the United States, which shall include the in-
18 formation and recommendations listed in sub-
19 section (b);

20 (B) not later than 2 years after the date
21 of enactment of this Act, a final report on arti-
22 ficial intelligence and its impact on the work-
23 force of the United States, which shall include
24 the information and recommendations listed in
25 subsection (b); and

1 (C) not later than 5 years after the final
2 report described in subparagraph (B) is sub-
3 mitted, an updated report reassessing the infor-
4 mation and recommendations listed in sub-
5 section (b).

6 (2) MEMORANDUM OF UNDERSTANDING.—The
7 Secretary of Labor may enter into a memorandum
8 of understanding with the Director of the National
9 Science Foundation and the Secretary of Education
10 to establish procedures for the preparation and sub-
11 mission of the interim and final reports described in
12 paragraph (1).

13 (b) REQUIRED INFORMATION.—Each report sub-
14 mitted under subsection (a) shall include the following:

15 (1) An identification of the specific data relat-
16 ing to the workforce, and the availability of such
17 data, necessary to properly analyze the impact and
18 growth of artificial intelligence on the workforce of
19 the United States and outline how much of this data
20 is privately owned, and the effectiveness of Federal,
21 State, or industry efforts (including public-private
22 partnerships) to make privately owned data on the
23 workforce of the United States available for Federal
24 research purposes.

1 (2) Identification of industries and occupations
2 projected to have the most growth in artificial intel-
3 ligence use, the extent to which the technology is
4 likely to result in the enhancement of workers' capa-
5 bilities or their displacement, and level of education
6 currently consistent with industries and occupations
7 identified.

8 (3) Analysis of how growth in artificial intel-
9 ligence use will impact job quality in the industries
10 and occupations identified in paragraph (2).

11 (4) Identification of opportunities for workers,
12 educators, institutions of higher education, Con-
13 gress, labor organizations, or other relevant stake-
14 holders to influence the impact of artificial intel-
15 ligence on workers across various industries.

16 (5) Analysis of how educational entities, work-
17 force development organizations, and labor organiza-
18 tions can collaborate to advance new opportunities
19 for education and workforce development to support
20 an artificial intelligence-enabled economy and work-
21 force.

22 (6) Analysis of which demographic groups (in-
23 cluding based on race and ethnicity, gender, socio-
24 economic status or income level, age, disability sta-
25 tus, and geography) of workers and communities

1 currently stand to experience expanded career oppor-
2 tunities, and which of these groups currently appear
3 most vulnerable to career displacement, due to artifi-
4 cial intelligence.

5 (7) Analysis of the skills, expertise, and edu-
6 cation in emerging and advanced technology needed
7 to develop, operate, or work alongside artificial intel-
8 ligence over the next decades, as compared to the
9 levels of such comparable expertise and education
10 among the workforce as of the date of enactment of
11 this Act, with a differentiation between core com-
12 petencies required across the entire workforce and
13 competencies required within the industries and oc-
14 cupations identified in paragraph (2).

15 (8) Identification of methods by which nec-
16 essary skills, expertise, and education can be effec-
17 tively delivered to various segments of the United
18 States workforce, including promising efforts under-
19 way as of the time of the report that can be ex-
20 panded.

21 (9) Identification of industry leaders, institu-
22 tions of higher education, and labor organizations at
23 the forefront of research and application of artificial
24 intelligence in the industries and occupations identi-
25 fied in paragraph (2).

1 (10) Identification of the resources and oppor-
2 tunities required for labor organizations and institu-
3 tions of higher education, including community col-
4 leges, technical colleges, minority-serving institutions
5 (including Tribal Colleges and Universities), and in-
6 stitutions of higher education serving rural areas, to
7 deliver skills, expertise, and education identified in
8 paragraph (7).

9 (11) Identification of the demographic charac-
10 teristics and educational background (including level
11 of education) of the individuals who deliver skills, ex-
12 pertise, and education to students at the institutions
13 described in paragraph (10).

14 (12) Recommendations to support enhanced
15 workforce development and prepare future workforce
16 members for the artificial intelligence economy, and
17 any other relevant observations or recommendations
18 within the field of emerging and advanced tech-
19 nology, which shall include recommendations on—

20 (A) methods to expand public access to
21 privately-owned workforce data and govern-
22 ment-owned workforce data, for the purpose of
23 researching the effect of emerging technologies
24 on the United States workforce;

1 (B) policy, regulatory, or programmatic
2 options for stakeholders (workers, educators, in-
3 stitutions of higher education, Congress, labor
4 organizations, or other relevant stakeholders) to
5 effectively enhance educational and workforce
6 development opportunities, including mitigating
7 perceived negative impacts of artificial intel-
8 ligence on segments of the United States work-
9 force;

10 (C) recommendations to employers on best
11 practices to engage workers and representatives
12 of workers, including labor organizations, in de-
13 cisionmaking on the integration of artificial in-
14 telligence into the workplace;

15 (D) methods to upskill or mitigate earn-
16 ings or income losses to demographic groups
17 identified in paragraph (6) as most vulnerable
18 to career displacement, due to artificial intel-
19 ligence;

20 (E) methods to encourage low cost, open
21 source sharing of industry valued credentials
22 certifying the types of skills, expertise, and edu-
23 cation identified in paragraph (7);

24 (F) methods to ensure core skills and com-
25 petencies identified in paragraph (7) can be

1 evaluated, updated, and made public by relevant
2 stakeholders as needed, given rapid develop-
3 ments in the field of artificial intelligence;

4 (G) methods to ensure community colleges,
5 technical colleges, minority-serving institutions
6 (including Tribal Colleges and Universities),
7 and institutions of higher education serving
8 rural areas receive resources and opportunities
9 identified in paragraph (10);

10 (H) methods to promote knowledge sharing
11 and capacity building between industry leaders,
12 labor organizations, and institutions identified
13 in paragraph (9) and community colleges, tech-
14 nical colleges, minority-serving institutions (in-
15 cluding Tribal Colleges and Universities), and
16 rural institutions of higher education; and

17 (I) other methods to ensure that the skills,
18 expertise, and education needed to develop, op-
19 erate, or work alongside artificial intelligence
20 are delivered to vulnerable demographic groups
21 identified in paragraph (6), rural workers, and
22 other historically underserved segments of the
23 United States workforce (including workers
24 with disabilities).

1 (c) COLLABORATION.—In preparing the report under
2 subsection (a), the Secretary of Labor, the Director of the
3 National Science Foundation, and the Secretary of Edu-
4 cation shall collaborate, through a series of public meet-
5 ings, roundtables or other methods, with—

6 (1) local educational agencies, State educational
7 agencies, State agencies with responsibility for the
8 administration of a core program (as defined in sec-
9 tion 3 of the Workforce Innovation and Opportunity
10 Act (29 U.S.C. 3102)), institutions of higher edu-
11 cation (including community colleges, technical col-
12 leges, minority-serving institutions (including Tribal
13 Colleges and Universities), labor organizations, and
14 institutions of higher education serving rural areas),
15 workforce-training organizations, National Labora-
16 tories, and teacher and educator preparation pro-
17 grams;

18 (2) a broad range of industrial stakeholders in
19 the technology, manufacturing, employment, human
20 resources, and service sectors, including companies
21 (large and small), think tanks, organized labor, and
22 industry organizations;

23 (3) the National Academies of Sciences, Engi-
24 neering, and Medicine, including by sharing relevant
25 information obtained as a result of the study con-

ducted under section 5105 of the National Artificial Intelligence Initiative Act of 2020 (Public Law 116–283; 134 Stat. 4530); and

(4) the Secretary of Commerce, the Director of the White House Office of Science and Technology Policy, the Director of the National Artificial Intelligence Initiative Office, the National Cyber Director, and the heads of any other Federal agency the Secretary of Labor, the Director of the National Science Foundation, and the Secretary of Education determine appropriate.

TITLE II—EMERGING AND ADVANCED TECHNOLOGY EDUCATION AND WORKFORCE DEVELOPMENT

SEC. 201. FINDINGS.

Congress finds the following:

(1) Emerging and advanced technologies are transforming industry, creating new fields of commerce, driving innovation, and bolstering productivity. Emerging and advanced technology and information occupations are projected to grow by 377,500 jobs per year on average between 2022 and 2032, much faster than the average for all other occupations.

1 (2) As of 2024, more than 400,000 computing
2 and technology jobs remain unfilled in the United
3 States. These unfilled jobs present a significant op-
4 portunity for individuals to advance in the 21st-cen-
5 tury economy. It is projected that there will be
6 660,000 new jobs in the technology and computing
7 sector by 2032. However, the availability of emerg-
8 ing and advanced technology education at the time
9 of enactment of this Act does not equitably provide
10 all students in the United States with the tools to
11 fill these technology sector jobs.

12 (3) Given the rapidly increasing interest and
13 deployment of artificial intelligence and other new
14 technologies in the workplace, knowledge of, and the
15 skills to use, emerging and advanced technology is
16 increasingly essential for all individuals, not just
17 those working or planning to work in the technology
18 sector.

19 (4) Providing students with emerging and ad-
20 vanced technology education in elementary school
21 and secondary school is critical for student success,
22 and strengthening the workforce of a 21st century
23 economy.

24 (5) While an estimated 90 percent of parents
25 want technology, such as computer science, taught

1 in their children’s schools, just 44 percent of all
 2 middle schools and 57.5 percent of secondary schools
 3 offer high-quality technology instruction that in-
 4 cludes programming and coding.

5 (6) Lack of universal emerging and advanced
 6 technology education is evident in the lack of a wide-
 7 spread tech industry, which is overwhelmingly con-
 8 centrated in a few cities nationwide. Emerging and
 9 advanced technology education is limited to affluent
 10 schools and students, placing low-income, minority,
 11 and rural communities at risk of being left behind.

12 **SEC. 202. DEFINITIONS.**

13 In this title:

14 (1) COMPUTATIONAL THINKING.—The term
 15 “computational thinking” means the wide range of
 16 creative processes that go into formulating problems
 17 and their solutions in such a way that the solutions
 18 can be carried out by a computer, and may involve
 19 some understanding of software and hardware de-
 20 sign, logic and the use of abstraction and represen-
 21 tation, algorithm design, algorithm expression, prob-
 22 lem decomposition, modularity, programming para-
 23 digms and languages, issues of information security
 24 and privacy, the application of computation across a

1 wide range of disciplines, and the societal impact of
2 computing.

3 (2) ELIGIBLE ENTITY.—The term “eligible enti-
4 ty” means—

5 (A) a State educational agency, as defined
6 in section 8101 of the Elementary and Sec-
7 ondary Education Act of 1965 (20 U.S.C.
8 7801);

9 (B) a local educational agency, as defined
10 in section 8101 of the Elementary and Sec-
11 ondary Education Act of 1965 (20 U.S.C.
12 7801);

13 (C) an eligible Tribal school;

14 (D) a community college, which shall have
15 the meaning given the term “junior or commu-
16 nity college” in section 312(f) of the Higher
17 Education Act of 1965 (20 U.S.C. 1058(f));

18 (E) a technical college or postsecondary vo-
19 cational institution, as that term is defined in
20 section 102(c) of the Higher Education Act of
21 1965 (20 U.S.C. 1002(c));

22 (F) a labor organization;

23 (G) a State agency with responsibility for
24 a workforce development program, as defined in

1 section 3 of the Workforce Innovation and Op-
 2 portunity Act (29 U.S.C. 3102); or

3 (H) an institution of higher education, as
 4 defined in section 101 of the Higher Education
 5 Act of 1965 (20 U.S.C. 1001).

6 (3) ELIGIBLE TRIBAL SCHOOL.—The term “eli-
 7 gible Tribal school” means—

8 (A) a school operated by the Bureau of In-
 9 dian Education;

10 (B) a school operated pursuant to the In-
 11 dian Self-Determination and Education Assist-
 12 ance Act (25 U.S.C. 5301 et seq.); or

13 (C) a tribally controlled school (as defined
 14 in section 5212 of the Tribally Controlled
 15 Schools Act of 1988 (25 U.S.C. 2511)).

16 (4) EMERGING AND ADVANCED TECHNOLOGY
 17 EDUCATION.—The term “emerging and advanced
 18 technology education” includes education in any of
 19 the following: computational thinking; software de-
 20 sign; hardware architecture and organization; theo-
 21 retical foundations; use of abstraction and represen-
 22 tation in problem solving; logic; algorithm design
 23 and implementation; the limits of computation; pro-
 24 gramming paradigms and languages; parallel and
 25 distributed computing; information security and pri-

1 vacy; computing systems and networks; graphics and
 2 visualization; databases and information retrieval;
 3 the relationship between computing and mathe-
 4 matics; artificial intelligence; quantum computing;
 5 applications of computing across a broad range of
 6 disciplines and problems; cloud computing; and the
 7 social impacts and professional practices of com-
 8 puting.

9 (5) POVERTY LINE.—The term “poverty line”
 10 has the meaning given the term in section 8101 of
 11 the Elementary and Secondary Education Act of
 12 1965 (20 U.S.C. 7801).

13 (6) PROGRAMMING.—The term “programming”
 14 means a hands-on, inquiry-based way in which com-
 15 putational thinking may be learned.

16 (7) SECRETARY.—The term “Secretary” means
 17 the Secretary of Education.

18 (8) STEAM.—The term “STEAM” means the
 19 subjects of science, technology, engineering, arts,
 20 and mathematics, including emerging and advanced
 21 technology.

22 **SEC. 203. DEPARTMENT OF EDUCATION GRANTS.**

23 (a) AUTHORIZATION OF GRANTS.—

24 (1) IN GENERAL.—The Secretary shall award
 25 grants to eligible entities to serve as models for na-

1 tional replication of emerging and advanced tech-
 2 nology education expansion efforts, including by
 3 building participants' broader transferable skills, not
 4 just specialized technical skills. From the amounts
 5 appropriated under subsection (g), after reserving
 6 amounts under subsection (e), the Secretary shall—

7 (A) reserve 50 percent of the remaining
 8 funds to award grants to eligible entities that
 9 propose to use grant funds in accordance with
 10 subsection (c); and

11 (B) reserve 50 percent of the remaining
 12 funds to award grants to eligible entities that
 13 propose to use grant funds in accordance with
 14 subsection (d).

15 (2) CONSORTIA AND PARTNERSHIPS.—An eligi-
 16 ble entity may apply for a grant under this section
 17 as part of a consortium or in partnership with a
 18 State educational agency or other partner.

19 (3) DURATION.—Grants awarded under this
 20 section shall be for a period of not more than 5
 21 years.

22 (4) STAGGERING GRANT AWARDS.—The Sec-
 23 retary may stagger grant awards under this section
 24 over the period of authorization for such grant
 25 awards.

1 (5) CONSIDERATIONS.—In awarding grants
2 under this section, the Secretary shall consider—

3 (A) the information and recommendations
4 included in the reports prepared under section
5 103; and

6 (B) structural and other barriers facing
7 specific demographic groups, as informed by the
8 reports prepared under section 103.

9 (b) APPLICATION REQUIREMENTS.—

10 (1) IN GENERAL.—An eligible entity that de-
11 sires a grant under this section shall submit an ap-
12 plication to the Secretary at such time, in such man-
13 ner, and containing such information as the Sec-
14 retary may require.

15 (2) PLAN.—An eligible entity that proposes to
16 use grant funds in accordance with subsection (c)
17 shall include in the application under paragraph (1),
18 at a minimum, plans for the following:

19 (A) Every high school student served by
20 the eligible entity to have access to emerging
21 and advanced technology education not later
22 than 5 years after receipt of grant funds.

23 (B) All students served by the eligible enti-
24 ty to have access to a progression of emerging
25 and advanced technology education from pre-

1 kindergarten through middle school that pre-
2 pares students for high school emerging and ad-
3 vanced technology education.

4 (C) Expansion of overall access to rigorous
5 (as defined by the Secretary) STEAM classes,
6 utilizing emerging and advanced technology as
7 a catalyst for increased interest in STEAM
8 more broadly, and reducing the enrollment and
9 academic achievement gap for underrepresented
10 groups, such as minorities, girls, and youth
11 from families living at, or below, the poverty
12 line.

13 (D) Continuous monitoring and evaluation
14 of project activities.

15 (E) Effectively sustaining project activities
16 after the grant period ends, and the length of
17 time which the applicant plans to sustain the
18 project activities.

19 (c) GRANT FUNDS FOR EMERGING AND ADVANCED
20 TECHNOLOGY EDUCATION.—

21 (1) REQUIRED ACTIVITIES.—An eligible entity
22 that receives a grant under subsection (a)(1)(A)
23 shall use the grant funds for the following activities:

1 (A) Training teachers to teach emerging
2 and advanced technology, including providing
3 professional development opportunities.

4 (B) Expanding access to high-quality
5 learning materials (as defined by the Secretary)
6 and online learning options, including equip-
7 ment and other related technologies and access
8 to broadband Internet that are necessary to
9 fully perform in the area of emerging and ad-
10 vanced technologies.

11 (C) Creating plans for expanding overall
12 access to rigorous (as defined by the Secretary)
13 STEAM classes, utilizing emerging and ad-
14 vanced technology as a catalyst for increased
15 interest in STEAM more broadly, and reducing
16 course equity gaps for all students, including
17 underrepresented groups, such as minorities,
18 girls, and youth from low-income families.

19 (D) Ensuring additional support and re-
20 sources, which may include mentoring for stu-
21 dents traditionally underrepresented in STEAM
22 fields.

23 (E) Ongoing industry engagement to re-
24 ceive feedback on curricula and the emerging

1 skills needed of artificial intelligence-related
 2 jobs.

3 (2) PERMISSIBLE ACTIVITIES.—An eligible enti-
 4 ty that receives a grant under subsection (a)(1)(A)
 5 may use the grant funds for the following activities:

6 (A) Building effective regional collabora-
 7 tions with industry, nonprofit organizations,
 8 State boards and local boards (as such terms
 9 are defined in section 3 of the Workforce Inno-
 10 vation and Opportunity Act (29 U.S.C. 3102)),
 11 2-year and 4-year degree granting institutions
 12 of higher education (including community col-
 13 leges, technical colleges, historically Black col-
 14 leges and universities (as defined within the
 15 meaning of the term “part B institution” in
 16 section 322 of the Higher Education Act of
 17 1965 (20 U.S.C. 1061)), Hispanic-serving insti-
 18 tutions (as defined in section 502 of such Act
 19 (20 U.S.C. 1101a)), Asian American and Na-
 20 tive American Pacific Islander-serving institu-
 21 tions (as defined in section 371(c) of such Act
 22 (20 U.S.C. 1067q(c))), Tribal Colleges and Uni-
 23 versities (as defined in section 316 of such Act
 24 (20 U.S.C. 1059c)), Alaska Native-serving in-
 25 stitutions (as defined in section 317(b) of such

1 Act (20 U.S.C. 1059d(b))), Native Hawaiian-
2 serving institutions (as defined in section
3 317(b) of such Act (20 U.S.C. 1059d(b))), Pre-
4 dominantly Black Institutions (as defined in
5 section 371(c) of such Act (20 U.S.C.
6 1067q(c))), Native American-serving, nontribal
7 institutions (as defined in section 371(c) of
8 such Act (20 U.S.C. 1067q(c))), and other mi-
9 nority-serving institutions), and out-of-school
10 providers.

11 (B) Recruiting and hiring instructional
12 personnel as needed, including teachers and
13 paraeducators (which shall have the meaning
14 given the term “paraprofessional” in section
15 8101 of the Elementary and Secondary Edu-
16 cation Act of 1965 (20 U.S.C. 7801)), including
17 through support for the workforce development
18 system (as defined in section 3 of the Work-
19 force Innovation and Opportunity Act (29
20 U.S.C. 3102)) in the State.

21 (C) Preparations for effectively sustaining
22 project activities after the grant period ends.

23 (D) Disseminating information about effec-
24 tive practices.

1 (3) LIMITATION.—Not more than 15 percent of
2 a grant awarded under subsection (a)(1)(A) may be
3 used to purchase equipment.

4 (d) GRANT FUNDS FOR EMERGING AND ADVANCED
5 TECHNOLOGY TEACHER DEVELOPMENT AND RECRUIT-
6 MENT.—

7 (1) IN GENERAL.—An eligible entity that re-
8 ceives a grant under subsection (a)(1)(B) shall use
9 the grant funds for emerging and advanced tech-
10 nology teacher development and recruitment, which
11 may include professional development opportunities,
12 loan forgiveness, or tuition reimbursement for serv-
13 ice as an emerging and advanced technology teacher,
14 or any other program designed to develop and re-
15 cruit emerging and advanced technology teachers.

16 (2) FULFILLING OBLIGATION.—If an eligible
17 entity that receives a grant under subsection
18 (a)(1)(B) uses the grant funds to implement a loan
19 forgiveness program or program for tuition reim-
20 bursement for service as an emerging and advanced
21 technology teacher, the eligible entity shall fulfill any
22 loan forgiveness or tuition reimbursement obligation
23 made to a teacher in exchange for service.

24 (e) NATIONAL ACTIVITIES.—The Secretary may re-
25 serve not more than 2.5 percent of funds available for

1 grants under this section for national activities, including
2 technical assistance, evaluation, and dissemination.

3 (f) EVALUATIONS.—In carrying out this section, the
4 Secretary shall authorize third-party evaluations of grants
5 awarded under this section to help build an evidence base
6 of programs that advance a 21st century artificial intel-
7 ligence workforce.

8 (g) AUTHORIZATION OF APPROPRIATIONS.—There
9 are authorized to be appropriated to carry out this section
10 \$160,000,000 for the period of fiscal years 2025 through
11 2029.

12 **SEC. 204. DEPARTMENT OF LABOR GRANTS.**

13 (a) GRANTS AUTHORIZED.—

14 (1) IN GENERAL.—The Secretary of Labor shall
15 award grants to eligible entities to serve as models
16 for national replication of emerging and advanced
17 technology workforce expansion efforts, including by
18 building participants' broader transferable skills, not
19 just specialized technical skills. From the amounts
20 appropriated under subsection (f), after reserving
21 amounts under subsection (d), the Secretary of
22 Labor shall award grants as described in subsection
23 (b).

24 (2) CONSORTIA AND PARTNERSHIPS.—An eligi-
25 ble entity may apply for a grant under this section

1 as part of a consortium or in partnership with a
2 State workforce agency or other partner.

3 (3) DURATION.—Grants awarded under this
4 section shall be for a period of not more than 5
5 years.

6 (4) STAGGERING GRANT AWARDS.—The Sec-
7 retary of Labor may stagger grant awards under
8 this section over the period of authorization for such
9 grant awards.

10 (5) CONSIDERATIONS.—In awarding grants
11 under this section, the Secretary of Labor shall con-
12 sider—

13 (A) the information and recommendations
14 included in the reports prepared under section
15 103; and

16 (B) structural and other barriers facing
17 specific demographic groups, as informed by the
18 reports prepared under section 103.

19 (b) GRANT FUNDS TO SERVE INDIVIDUALS SERI-
20 OUSLY AFFECTED BY AI.—

21 (1) IN GENERAL.—An eligible entity that re-
22 ceives a grant under this section shall use the grant
23 funds to serve individuals who—

24 (A) have a high school diploma or its rec-
25 ognized equivalent; and

1 (B) are employed in an industry or occupa-
2 tion projected, pursuant to the report under
3 section 103(b)(2), to have the most growth in
4 artificial intelligence use, which is likely to sig-
5 nificantly impact the job opportunities or wages
6 of workers.

7 (2) ACTIVITIES.—In serving individuals de-
8 scribed in paragraph (1), an eligible entity that re-
9 ceives a grant under this section shall use the grant
10 funds for one or more of the following purposes:

11 (A) Upskilling such individuals, including
12 by offering scholarships or skill certifications,
13 or by supporting other programs that upskill
14 such individuals.

15 (B) Enabling lifelong learning and cross
16 training, including continuing education certifi-
17 cates or programs aiming to update workers'
18 skills related to advanced and emerging tech-
19 nology.

20 (c) APPLICATION REQUIREMENTS.—An eligible enti-
21 ty that desires a grant under this section shall submit an
22 application to the Secretary of Labor at such time, in such
23 manner, and containing such information as the Secretary
24 of Labor may require, including, at a minimum, plans for
25 the following:

1 (1) Continuous monitoring and evaluation of
2 project activities.

3 (2) Effectively sustaining project activities after
4 the grant period ends, and the length of time which
5 the applicant plans to sustain the project activities.

6 (d) NATIONAL ACTIVITIES.—The Secretary of Labor
7 may reserve not more than 2.5 percent of funds available
8 for grants under this section for national activities, includ-
9 ing technical assistance, evaluation, and dissemination.

10 (e) EVALUATIONS.—In carrying out this section, the
11 Secretary of Labor shall authorize third-party evaluations
12 of grants awarded under this section to help build an evi-
13 dence base of programs that advance a 21st century artifi-
14 cial intelligence workforce.

15 (f) AUTHORIZATION OF APPROPRIATIONS.—There
16 are authorized to be appropriated to carry out this section
17 \$90,000,000 for the period of fiscal years 2025 through
18 2029.

19 **SEC. 205. REPORTING REQUIREMENTS.**

20 (a) GRANTEE REPORTS.—Each eligible entity—

21 (1) that receives a grant under section 203
22 shall submit to the Secretary a report, not less than
23 twice a year during the grant period, on the use of
24 grant funds that shall include data on the numbers
25 of individuals served through activities funded under

1 such section, disaggregated by race (for Asian and
2 Native Hawaiian or Pacific Islander individuals
3 using the same race response categories as the de-
4 cennial census of the population), ethnicity, gender,
5 and eligibility to participate in the school lunch pro-
6 gram established under the Richard B. Russell Na-
7 tional School Lunch Act (42 U.S.C. 1751 et seq.);
8 and

9 (2) that receives a grant under section 204
10 shall submit to the Secretary of Labor a report, not
11 less than twice a year during the grant period, on
12 the use of grant funds that shall include data on the
13 numbers of individuals served through activities
14 funded under such section, disaggregated by race
15 (for Asian and Native Hawaiian or Pacific Islander
16 individuals using the same race response categories
17 as the decennial census of the population), ethnicity,
18 and gender.

19 (b) REPORT BY THE SECRETARY.—Not later than 5
20 years after the first grant is awarded under this title, the
21 Secretary and the Secretary of Labor shall submit to Con-
22 gress a report based on the analysis of reports received
23 under subsection (a) with a recommendation on how to
24 expand the programs under this title.

1 **SEC. 206. AMENDMENTS TO OTHER LAWS.**

2 (a) DEPARTMENT OF EDUCATION ORGANIZATION
 3 ACT.—Section 203(c)(1) of the Department of Education
 4 Organization Act (20 U.S.C. 3413(c)(1)) is amended by
 5 inserting “, which shall include information with respect
 6 to the existence of emerging and advanced technology edu-
 7 cation (as defined in section 202 of the Workforce of the
 8 Future Act of 2024), disaggregated by the type of emerg-
 9 ing and advanced technology education and by the type
 10 of eligible entity (as defined in such section 202)” after
 11 “Rights”.

12 (b) THE EDUCATION SCIENCES REFORM ACT OF
 13 2002.—Section 153(a)(1) of the Education Sciences Re-
 14 form Act of 2002 (20 U.S.C. 9543(a)(1)) is amended—

15 (1) in subparagraph (N), by striking “and”
 16 after the semicolon;

17 (2) in subparagraph (O), by inserting “and”
 18 after the semicolon; and

19 (3) by adding at the end the following:

20 “(P) the existence of emerging and ad-
 21 vanced technology education (as defined in sec-
 22 tion 202 of the Workforce of the Future Act of
 23 2024) in elementary schools and secondary
 24 schools, and the degree of competency in emerg-

- 1 ing and advanced technology fields among such
- 2 students;”.

