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(Original Signature of Member)

112TH CONGRESS
1ST SESSION

H. R. _____

To amend the Elementary and Secondary Education Act of 1965 to provide for the development of State statistical literacy plans and to authorize the Secretary of Education to make grants for statistics-related teacher professional development and the improvement of statistics education.

IN THE HOUSE OF REPRESENTATIVES

Mr. LOEBSACK introduced the following bill; which was referred to the Committee on _____

A BILL

To amend the Elementary and Secondary Education Act of 1965 to provide for the development of State statistical literacy plans and to authorize the Secretary of Education to make grants for statistics-related teacher professional development and the improvement of statistics education.

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

1 **SECTION 1. SHORT TITLE.**

2 This Act may be cited as the “Statistics Teaching,
3 Aptitude, and Training Act of 2011” or the “STAT Act
4 of 2011”.

5 **SEC. 2. FINDINGS.**

6 The Congress finds the following:

7 (1) Statistical literacy, the understanding and
8 use of the language and tools of statistics, is vital
9 for United States citizens in an era of intense global
10 competition and growing reliance on data, because of
11 a statistically literate individual’s ability to—

12 (A) ask and evaluate critical questions
13 about the design of a study and the appro-
14 priateness of the conclusions drawn from a
15 study;

16 (B) distinguish arguments based on data
17 and evidence from arguments based on anec-
18 dotes;

19 (C) recognize and interpret different rep-
20 resentations of data in context; and

21 (D) formulate questions that can be ad-
22 dressed with data, collect and organize relevant
23 data, and draw appropriate statistical conclu-
24 sions.

1 (2) Statistical literacy is essential for both ef-
2 fective citizenship and personal well-being because of
3 the everyday need to—

4 (A) interpret and synthesize data displays
5 and summaries, such as polls, surveys, and
6 study outcomes; and

7 (B) critically evaluate claims based on
8 data—

9 (i) as a consumer of the news media;

10 (ii) in making medical decisions; and

11 (iii) in making financial decisions,

12 such as decisions related to a mortgage or

13 a car repair.

14 (3) Statistics provides tools for describing varia-
15 bility and uncertainty to support making informed
16 decisions, both large and small. A foundation in sta-
17 tistical thinking helps individuals to evaluate risks
18 and weigh the likelihood of various outcomes.

19 (4) Statistical literacy provides tools for dealing
20 with uncertainty. There is uncertainty in virtually
21 every situation and number individuals face, but sta-
22 tistical literacy enables individuals to make rational
23 decisions in the face of uncertainty.

24 (5) Statistical concepts are important for the
25 study of mathematics, the natural sciences, and the

1 social sciences. In mathematics, statistical literacy
2 provides applications and real-life illustrations of the
3 importance of mathematics, which motivates stu-
4 dents for deeper learning. In the natural sciences
5 and the social sciences, statistical problem-solving
6 teaches a framework for the scientific process and
7 an understanding of data and their limitations.

8 (6) Effective statistical literacy education in ele-
9 mentary and secondary school would—

10 (A) produce graduates better equipped
11 with the skills necessary to compete in the
12 workforce of the 21st century, with its bur-
13 geoning growth of and dependence on data;

14 (B) enhance student learning and problem-
15 solving skills across disciplines; and

16 (C) equip students with knowledge needed
17 to be responsible and engaged citizens.

18 (7) Room exists for significant improvement in
19 statistics education because of the following factors:

20 (A) While national mathematics standards
21 and benchmarks from organizations such as
22 Achieve, the College Board, and the National
23 Council for Teachers of Mathematics support
24 data analysis and probability as essential com-
25 ponents of mathematics education, many ele-

1 elementary and secondary school teachers have not
2 received the necessary training at the appro-
3 priate level to teach statistical literacy in their
4 classrooms.

5 (B) Most State guidelines include statistics
6 and probability, but the topic tends to be
7 skipped because of the lack of teacher prepara-
8 tion and proper emphasis on the topic in State
9 assessments.

10 (C) While some students do take a course
11 in statistics, sound statistical reasoning skills
12 take time for students to develop and cannot be
13 honed in a single course. Foundational statis-
14 tical concepts should be introduced and nur-
15 tured in the elementary grades and strength-
16 ened and expanded throughout the middle
17 school and high school grades and in postsec-
18 ondary courses.

19 (D) Teacher training programs at institu-
20 tions of higher education for pre-service mathe-
21 matics and science teachers and professional de-
22 velopment programs designed to reach in-serv-
23 ice mathematics and science teachers do not yet
24 include statistical concepts and pedagogy at the
25 appropriate level.

1 (E) Teachers do not yet have access to ma-
2 terials supported by statistics education re-
3 search.

4 **SEC. 3. STATISTICAL LITERACY EDUCATION.**

5 (a) IN GENERAL.—Part D of title V of the Elemen-
6 tary and Secondary Education Act of 1965 (20 U.S.C.
7 7241 et seq.) is amended by adding at the end the fol-
8 lowing new subpart:

9 **“Subpart 22—Statistical Literacy Education**
10 **“CHAPTER A—STATISTICAL LITERACY**
11 **PLANS**

12 **“SEC. 5621. PLAN REQUIRED; DEVELOPMENT, SUBMISSION,**
13 **AND APPROVAL.**

14 “(a) PLAN REQUIRED.—To be eligible to receive a
15 grant under section 5632(a), a State educational agency
16 shall submit a statistical literacy plan to the Secretary in
17 accordance with this section.

18 “(b) DEVELOPMENT.—

19 “(1) IN GENERAL.—A State educational agency
20 shall, in developing a statistical literacy plan—

21 “(A) consult with the Statistical Literacy
22 Advisory Panel established by the State edu-
23 cational agency under paragraph (2)(A); and

24 “(B) seek input from the public.

1 “(2) STATISTICAL LITERACY ADVISORY
2 PANEL.—

3 “(A) IN GENERAL.—A State educational
4 agency developing a statistical literacy plan
5 shall establish a Statistical Literacy Advisory
6 Panel to advise the State educational agency on
7 the contents of the plan.

8 “(B) COMPOSITION OF PANEL.—A Statis-
9 tical Literacy Advisory Panel of a State edu-
10 cational agency shall include the following mem-
11 bers, to be appointed by the State educational
12 agency:

13 “(i) 1 member from the State edu-
14 cational agency and 1 member from a local
15 educational agency within the State.

16 “(ii) 2 statisticians from institutions
17 of higher education, at least 1 of whom has
18 expertise in teaching statistics education.

19 “(iii) 2 teachers from public elemen-
20 tary schools or public secondary schools, 1
21 of whom teaches a grade that is not higher
22 than the 8th grade and 1 of whom teaches
23 a grade that is not lower than the 9th
24 grade and not higher than the 12th grade.

1 “(iv) 1 member from a teacher train-
2 ing department or professional develop-
3 ment center of an institution of higher
4 education who has expertise in statistics or
5 mathematics education.

6 “(v) 1 statistician with experience
7 working in the private sector in a field that
8 employs a significant number of statisti-
9 cians, such as finance, computer science,
10 or market and survey research.

11 “(3) PLAN DEVELOPED FOR OTHER PUR-
12 POSES.—In the case of a State educational agency
13 that, prior to the date of the enactment of this sub-
14 part, developed a statistical literacy plan in coopera-
15 tion with State statistical literacy and education ex-
16 perts for purposes other than meeting the require-
17 ment of subsection (a), the agency shall be deemed
18 to meet the requirements of paragraphs (1) and (2).

19 “(c) APPROVAL.—

20 “(1) IN GENERAL.—Not later than 120 days
21 after submission by a State educational agency of a
22 statistical literacy plan, the Secretary shall, with
23 input from the Peer Review Board established under
24 paragraph (5)(A)—

1 “(A) if the plan meets the criteria de-
2 scribed in paragraph (2), approve the plan; or

3 “(B) if the plan does not meet such cri-
4 teria, inform the State educational agency of
5 any deficiencies in the plan and implement the
6 process described in paragraph (3).

7 “(2) CRITERIA FOR APPROVAL.—The criteria
8 described in this paragraph are the following:

9 “(A) The State educational agency certifies
10 to the Secretary that the plan was developed in
11 accordance with subsection (b).

12 “(B) The plan includes the contents de-
13 scribed in subsection (d).

14 “(C) Implementation of the plan will—

15 “(i) achieve the objectives described in
16 subsection (e); and

17 “(ii) ensure statistical literacy appro-
18 priate to the grade-level of all students in
19 elementary schools and secondary schools
20 served by the State educational agency.

21 “(3) PROCEDURE IF PLAN INADEQUATE.—

22 “(A) NOTICE AND OPPORTUNITY FOR RE-
23 VISION.—The Secretary may not deny approval
24 of a statistical literacy plan submitted by a

1 State educational agency under paragraph (1)
2 unless the Secretary has first—

3 “(i) informed the agency of any defi-
4 ciencies in the plan;

5 “(ii) provided the agency with an op-
6 portunity for a hearing on such defi-
7 ciencies;

8 “(iii) provided the agency with a pe-
9 riod of at least 90 days in which to revise
10 the plan; and

11 “(iv) offered the agency technical as-
12 sistance in revising the plan.

13 “(B) RESUBMISSION AND FINAL DECI-
14 SION.—A State educational agency that has
15 been given an opportunity to revise a statistical
16 literacy plan under subparagraph (A)(iii) shall
17 submit the revised plan to the Secretary not
18 later than the end of the period described in
19 such subparagraph. Not later than 120 days
20 after receiving the revised plan, the Secretary
21 shall approve or disapprove the plan.

22 “(4) STATE ACADEMIC CONTENT STANDARDS
23 AND ASSESSMENTS.—The Secretary may not, as a
24 condition of approval under this subsection of a sta-

1 tistical literacy plan of a State educational agency,
2 require that the State educational agency—

3 “(A) include in or delete from the statis-
4 tical literacy plan one or more specific elements
5 of the academic content standards adopted
6 under section 1111(b)(1)(A); or

7 “(B) use specific instruments or items for
8 academic assessment.

9 “(5) PEER REVIEW BOARD.—

10 “(A) ESTABLISHMENT.—The Secretary
11 shall establish a Peer Review Board to advise
12 the Secretary on whether a statistical literacy
13 plan submitted by a State educational agency
14 should be approved, revised, or (after the oppor-
15 tunity for revision required by paragraph
16 (3)(A)(iii)) disapproved.

17 “(B) MEMBERSHIP.—The Peer Review
18 Board shall be composed of a number of mem-
19 bers to be determined by the Secretary, to be
20 appointed by the Secretary. The Secretary shall
21 appoint members that—

22 “(i) are representative of parents,
23 teachers, State educational agencies, local
24 educational agencies, and nongovernmental
25 organizations; and

1 “(ii) are familiar with current issues
2 in the field of statistics and statistics edu-
3 cation and with the statistics education
4 needs of students.

5 “(C) COMPENSATION.—

6 “(i) IN GENERAL.—Except as pro-
7 vided in clause (ii), members of the Peer
8 Review Board shall serve without com-
9 pensation.

10 “(ii) TRAVEL EXPENSES.—Each
11 member of the Peer Review Board shall re-
12 ceive travel expenses, including per diem in
13 lieu of subsistence, in accordance with ap-
14 plicable provisions under subchapter I of
15 chapter 57 of title 5, United States Code.

16 “(d) CONTENTS.—The contents described in this sub-
17 section are the following:

18 “(1) A description of how the State educational
19 agency will measure the statistical literacy of stu-
20 dents, including—

21 “(A) challenging State academic content
22 standards and student academic achievement
23 standards in statistics education, and how sta-
24 tistics education instruction will be integrated

1 throughout the curriculum used in elementary
2 schools and secondary schools; and

3 “(B) a description of the relationship of
4 the plan to the secondary school graduation re-
5 quirements of the State.

6 “(2) A description of programs for professional
7 development for teachers to improve—

8 “(A) statistical subject-matter knowledge;
9 and

10 “(B) pedagogical skills in teaching statis-
11 tical concepts, including the use of—

12 “(i) interdisciplinary and research-
13 based learning; and

14 “(ii) innovative technology in the
15 classroom.

16 “(3) A description of how the State educational
17 agency will implement the plan, including securing
18 funding and other necessary support.

19 “(e) OBJECTIVES.—The objectives described in this
20 subsection are the following:

21 “(1) To prepare students to make informed de-
22 cisions in the face of uncertainty, including decisions
23 related to personal finance, using statistical rea-
24 soning necessary to interpret data and critically
25 evaluate claims based on data.

1 “(2) To provide experiences that incorporate
2 statistics into the regular school curriculum and to
3 create programs that teach statistical problem-solv-
4 ing as an investigative process, including experiences
5 and programs that—

6 “(A) promote statistical thinking through
7 hands-on problem-solving and concept activities;

8 “(B) emphasize concepts over formulas,
9 using real-world data;

10 “(C) stress the importance of context in
11 problem-solving;

12 “(D) recognize the omnipresence of varia-
13 bility; and

14 “(E) use appropriate technology to empha-
15 size concepts and support learning.

16 “(3) To create opportunities for enhanced and
17 ongoing professional development for teachers that
18 improves—

19 “(A) statistical subject-matter knowledge;

20 “(B) pedagogical skills in teaching statis-
21 tical concepts, including the use of—

22 “(i) interdisciplinary and research-
23 based learning; and

24 “(ii) innovative technology in the
25 classroom; and

1 “(C) the ability of teachers to collect, orga-
2 nize, analyze, and interpret classroom data to
3 inform instruction and evaluate student
4 progress in statistical literacy.

5 “(f) UPDATES OF PLAN.—A State educational agen-
6 cy that has a statistical literacy plan approved under sub-
7 section (e) and wishes to remain eligible for grant funds
8 under section 5632(a) shall submit to the Secretary for
9 approval under such subsection an updated plan—

10 “(1) not later than 4 years after the date of the
11 approval of the plan and every 4 years thereafter;
12 and

13 “(2) at any other time the agency considers
14 modification of the plan to be necessary to ensure
15 that the plan continues to achieve the objectives de-
16 scribed in subsection (e).

17 “(g) REPORT ON IMPLEMENTATION OF PLAN.—

18 “(1) IN GENERAL.—A State educational agency
19 shall submit to the Secretary, not later than 2 years
20 after receiving a grant under section 5632(a), and
21 biennially thereafter for each 2-year period during
22 any part of which the agency received grant funds
23 under such section, a report on the implementation
24 of the statistical literacy plan of the agency for

1 which an approval under subsection (c) is in effect
2 during such period.

3 “(2) REPORTING REQUIREMENTS.—A report re-
4 quired by paragraph (1) shall—

5 “(A) be in a form and include such con-
6 tents as the Secretary may require; and

7 “(B) be based on evaluation activities con-
8 ducted by the State educational agency on a
9 regular basis throughout implementation of the
10 plan.

11 “(3) PUBLIC AVAILABILITY.—The Secretary
12 shall make each report required by paragraph (1)
13 available to the public on an appropriate website.

14 **“SEC. 5622. GRANTS FOR DEVELOPMENT OF PLAN.**

15 “(a) AUTHORIZATION.—The Secretary may make
16 grants on a competitive basis to State educational agencies
17 for the development of statistical literacy plans required
18 by section 5621(a).

19 “(b) ELIGIBILITY.—The Secretary may only make a
20 grant under subsection (a) to a State educational agency
21 that—

22 “(1) the Secretary determines lacks the re-
23 sources to develop an adequate statistical literacy
24 plan; and

1 “(2) submits to the Secretary an application at
2 such time, in such form, and containing such infor-
3 mation and assurances as the Secretary may require.

4 “(c) REQUIRED ACTIVITIES.—A State educational
5 agency receiving a grant under subsection (a) shall—

6 “(1) not later than 1 year after receiving the
7 grant, submit to the Secretary a statistical literacy
8 plan in accordance with section 5621;

9 “(2) if the Secretary finds any deficiencies in
10 the plan, submit a revised plan in accordance with
11 the procedures described in subsection (c)(3) of such
12 section; and

13 “(3) not later than 30 days after the Secretary
14 approves the plan, apply for a grant under section
15 5632(a).

16 “(d) DURATION.—A grant under subsection (a) shall
17 be for a period of not more than 1 year.

18 “(e) NONRENEWABILITY.—The Secretary may not
19 award more than 1 grant under subsection (a) to the same
20 State educational agency.

21 **“CHAPTER B—STATISTICS EDUCATION**
22 **PROFESSIONAL DEVELOPMENT GRANTS**

23 **“SEC. 5631. PURPOSE.**

24 “The purpose of this chapter is to ensure the aca-
25 demic achievement of students in statistical literacy

1 through the professional development of teachers and
2 other education professionals.

3 **“SEC. 5632. FORMULA GRANTS TO STATES.**

4 “(a) AUTHORIZATION.—Using the allocation formula
5 developed under subsection (b), the Secretary shall make
6 one or more grants to each State educational agency that
7 has a statistical literacy plan approved under section
8 5621(c) and submits an application for a grant under this
9 subsection to enable each such agency to award subgrants
10 to eligible partnerships under section 5633(a).

11 “(b) REGULATIONS.—The Secretary shall promul-
12 gate regulations to implement this chapter. Such regula-
13 tions shall include the formula by which the Secretary will
14 allocate grants to State educational agencies under sub-
15 section (a).

16 “(c) ADMINISTRATIVE EXPENSES.—A State edu-
17 cational agency receiving a grant under subsection (a) may
18 not use more than 2.5 percent of the grant funds for ad-
19 ministrative expenses.

20 **“SEC. 5633. COMPETITIVE SUBGRANTS TO ELIGIBLE PART-**
21 **NERSHIPS.**

22 “(a) AUTHORIZATION.—From funds received under
23 section 5632(a), a State educational agency shall make
24 grants, on a competitive basis, to eligible partnerships to
25 enable the eligible partnerships to carry out the activities

1 described in subsection (c), consistent with the statistical
2 literacy plan of the State educational agency.

3 “(b) ELIGIBILITY.—

4 “(1) IN GENERAL.—A State educational agency
5 may not award a grant under subsection (a) to an
6 eligible partnership unless the eligible partnership
7 submits to the State educational agency an applica-
8 tion at such time, in such form, and containing such
9 information and assurances as the State educational
10 agency may require, including the contents described
11 in paragraph (2).

12 “(2) CONTENTS OF APPLICATION.—The con-
13 tents described in this paragraph are the following:

14 “(A) The results of a comprehensive as-
15 sessment of the teacher quality and professional
16 development needs, with respect to the teaching
17 and learning of statistical content, of the enti-
18 ties served by the eligible partnership.

19 “(B) An explanation of how the activities
20 to be carried out by the eligible partnership are
21 expected to improve student academic achieve-
22 ment and strengthen the quality of statistical
23 instruction at schools served by the eligible
24 partnership.

1 “(C) A description of how the activities to
2 be carried out by the eligible partnership—

3 “(i) will be aligned with challenging
4 State academic content standards and stu-
5 dent academic achievement standards in
6 statistics education and with the statistical
7 literacy plan of the State educational agen-
8 cy approved under section 5621(c); and

9 “(ii) will advance the teaching of
10 interdisciplinary courses that integrate sta-
11 tistics into the study of natural, social, and
12 economic systems.

13 “(D) A description of how the eligible part-
14 nership will carry out the activities described in
15 subsection (c).

16 “(E) An evaluation and accountability plan
17 that establishes rigorous objectives to measure
18 the impact of the activities carried out with
19 grant funds, including objectives to measure the
20 increase in the number of teachers served by
21 the eligible partnership who participate in sta-
22 tistics education content-based professional de-
23 velopment activities.

24 “(F) A description of how the eligible part-
25 nership will continue the activities carried out

1 with grant funds after the grant period has ex-
2 pired.

3 “(c) REQUIRED ACTIVITIES.—An eligible partnership
4 receiving a grant under subsection (a) shall use the grant
5 funds to carry out the following activities:

6 “(1) Creating opportunities for enhanced and
7 ongoing professional development of teachers that
8 improves the statistical subject-matter knowledge of
9 such teachers.

10 “(2) Creating opportunities for enhanced and
11 ongoing professional development of teachers that
12 improves pedagogical skills in teaching statistical
13 concepts, including in the use of—

14 “(A) interdisciplinary and research-based
15 learning; and

16 “(B) innovative classroom technology.

17 “(3) Establishing and operating statistics edu-
18 cation summer workshops or institutes, including
19 follow-up training, for elementary school and sec-
20 ondary school teachers to improve pedagogical skills
21 and subject-matter knowledge with respect to the
22 teaching of statistics concepts.

23 “(4) Developing or redesigning more rigorous
24 statistics education curricula that—

1 “(A) are aligned with challenging State
2 academic content standards and student aca-
3 demic achievement standards in statistics edu-
4 cation and with the statistical literacy plan of
5 the State educational agency; and

6 “(B) advance the teaching of interdiscipli-
7 nary courses that integrate statistics in the
8 teaching of mathematics, science, economics, fi-
9 nance and financial literacy, and social studies.

10 “(5) Designing programs to prepare the teach-
11 ers at a school to provide mentoring and professional
12 development to other teachers at such school to im-
13 prove teacher statistics education subject-matter and
14 pedagogical skills.

15 “(6) Establishing and operating programs to
16 bring teachers into contact with working profes-
17 sionals in statistical fields to expand the subject-
18 matter knowledge of such teachers regarding statis-
19 tical concepts and the research by such teachers on
20 statistical issues.

21 “(7) Creating initiatives that seek to incor-
22 porate statistics education into teacher training pro-
23 grams or accreditation standards consistent with the
24 statistical literacy plan of the State educational
25 agency.

1 “(d) DURATION.—A grant under subsection (a) shall
2 be for a period of not more than 4 years.

3 “(e) SUPPLEMENT, NOT SUPPLANT.—An eligible
4 partnership receiving a grant under subsection (a) shall
5 use such funds to supplement, not supplant, funds that
6 would otherwise be used for the activities described in sub-
7 section (c).

8 “(f) EVALUATION AND ACCOUNTABILITY REPORT.—
9 Not later than 90 days after the end of each year in which
10 an eligible partnership receives a grant under subsection
11 (a) from a State educational agency, the eligible partner-
12 ship shall submit a report to the State educational agency
13 on the progress of the eligible partnership in meeting the
14 objectives established in the evaluation and accountability
15 plan of the eligible partnership required by subsection
16 (b)(2)(E).

17 “(g) TERMINATION OF GRANT.—A State educational
18 agency may terminate a grant to an eligible partnership
19 at any time after the end of the 1st year of the grant
20 based on the insufficiency of the progress of the eligible
21 partnership in meeting the objectives established in the
22 evaluation and accountability plan of the eligible partner-
23 ship required by subsection (b)(2)(E).

1 **“SEC. 5634. ELIGIBLE PARTNERSHIP DEFINED.**

2 “In this chapter, the term ‘eligible partnership’
3 means a partnership between a local educational agency
4 and 1 or more of the following:

5 “(1) The teacher training department or profes-
6 sional development center of an institution of higher
7 education.

8 “(2) The statistics department of an institution
9 of higher education.

10 “(3) Another local educational agency, a public
11 elementary school or a public secondary school (in-
12 cluding a public charter school), or a consortium of
13 such schools.

14 “(4) A Federal, State, regional, or local statis-
15 tical agency that has demonstrated effectiveness in
16 improving the quality of statistics education teach-
17 ers.

18 **“CHAPTER C—STATISTICS EDUCATION**
19 **GRANTS TO BUILD NATIONAL CAPACITY**

20 **“SEC. 5641. PURPOSE.**

21 “The purpose of this chapter is to strengthen statis-
22 tics education as an integral part of the curriculum of ele-
23 mentary schools and secondary schools in the United
24 States.

1 **“SEC. 5642. GRANT PROGRAM.**

2 “(a) AUTHORIZATION.—From amounts reserved
3 under section 5652(c), the Secretary may make grants,
4 on a competitive basis, to eligible entities to enable the
5 eligible entities to carry out activities described in sub-
6 section (c).

7 “(b) ELIGIBILITY.—The Secretary may only make a
8 grant under subsection (a) to an eligible entity that sub-
9 mits to the Secretary an application at such time, in such
10 form, and containing such information and assurances as
11 the Secretary may require, including a description of how
12 the entity will use grant funds to carry out 1 or more of
13 the activities described in subsection (c).

14 “(c) USE OF FUNDS.—An eligible entity receiving a
15 grant under subsection (a) shall use grant funds to carry
16 out 1 or more of the following activities:

17 “(1) Developing model State standards and cur-
18 riculum frameworks for statistics education that
19 meet challenging academic content standards and
20 student academic achievement standards for statis-
21 tics education.

22 “(2) Replicating or disseminating information
23 about proven and tested model statistics education
24 programs that provide interdisciplinary instruction
25 that integrates statistics in mathematics, science, ec-
26 onomics, and social studies.

1 “(3) Developing and implementing new policy
2 approaches to advancing statistics education at the
3 State and national level.

4 “(4) Conducting studies of national significance
5 that—

6 “(A) provide a comprehensive, systematic,
7 and formal assessment of the state of statistics
8 education in the United States;

9 “(B) evaluate the effectiveness of teaching
10 statistics as a separate subject, and as an inte-
11 grating concept or theme; and

12 “(C) evaluate the effectiveness of statistics
13 education in improving student academic
14 achievement in mathematics, science, and other
15 core academic subjects.

16 “(5) Conducting projects that advance wide-
17 spread adoption by State educational agencies and
18 local educational agencies of statistics education con-
19 tent standards.

20 “(d) DURATION.—A grant under subsection (a) shall
21 be for a period of not less than 1 year and not more than
22 5 years.

23 “(e) REPORTS.—

24 “(1) BY ELIGIBLE ENTITY TO SECRETARY.—
25 Not later than 90 days after the end of each year

1 in which an eligible entity receives a grant under
2 subsection (a), the eligible entity shall submit to the
3 Secretary a report that—

4 “(A) describes the activities carried out by
5 the eligible entity using grant funds during the
6 year covered by the report; and

7 “(B) assesses whether such activities have,
8 directly or indirectly, helped State educational
9 agencies, local educational agencies, and schools
10 served by the eligible entity to make progress
11 towards achieving the objectives described in
12 section 5621(e).

13 “(2) BY SECRETARY TO CONGRESS.—Not later
14 than 2 years after the date of the enactment of this
15 subpart and annually thereafter for any year in
16 which grants are made under subsection (a), the
17 Secretary shall submit to Congress a report that—

18 “(A) describes the activities carried out by
19 eligible entities using grants under subsection
20 (a);

21 “(B) evaluates the success of such activi-
22 ties in improving national and State statistics
23 education capacity; and

24 “(C) makes such recommendations as the
25 Secretary considers appropriate to promote the

1 continuation and improvement of such activi-
2 ties.

3 “(f) TERMINATION OF GRANT.—The Secretary may
4 terminate a grant made to an eligible entity under sub-
5 section (a) if—

6 “(1) the eligible entity fails to submit the report
7 required by subsection (e)(1); or

8 “(2) the Secretary determines on the basis of
9 such report that the performance of the eligible enti-
10 ty with respect to improving statistics education is
11 inadequate.

12 “(g) SUPPLEMENT, NOT SUPPLANT.—An eligible en-
13 tity receiving a grant under subsection (a) shall use such
14 funds to supplement, not supplant, funds that would oth-
15 erwise be used for the activities carried out with grant
16 funds.

17 “(h) ADMINISTRATIVE EXPENSES.—The Secretary
18 may not use more than 7.5 percent of the amounts re-
19 served under section 5652(e) for administrative expenses.

20 **“SEC. 5643. ELIGIBLE ENTITY DEFINED.**

21 “In this chapter, the term ‘eligible entity’ means—

22 “(1) a teacher training department or profes-
23 sional development center of an institution of higher
24 education;

1 “(2) the statistics or mathematical sciences de-
2 partment of an institution of higher education;

3 “(3) a Federal, State, regional, or local statis-
4 tical agency that has demonstrated effectiveness, ex-
5 pertise, and experience in the development of the in-
6 stitutional, financial, intellectual, or policy resources
7 needed to help the field of statistics education be-
8 come more effective and widely practiced;

9 “(4) a nonprofit organization that has dem-
10 onstrated effectiveness, expertise, and experience in
11 the development of the institutional, financial, intel-
12 lectual, or policy resources needed to help the field
13 of statistics education become more effective and
14 widely practiced; or

15 “(5) any of the entities listed in paragraphs (1)
16 through (4) in partnership with a local educational
17 agency, a public elementary school or a public sec-
18 ondary school (including a public charter school), or
19 a consortium of such schools.

20 **“CHAPTER D—GENERAL PROVISIONS**

21 **“SEC. 5651. STATISTICAL LITERACY DEFINED.**

22 “‘In this subpart, the term ‘statistical literacy’ means
23 the understanding of and ability to use the language and
24 tools of statistics, including the ability to—

1 “(1) ask and evaluate critical questions about
2 the design of a study and the appropriateness of the
3 conclusions drawn from a study;

4 “(2) distinguish arguments based on data and
5 evidence from arguments based on anecdotes;

6 “(3) recognize and interpret different represen-
7 tations of data in context; and

8 “(4) formulate questions that can be addressed
9 with data, collect and organize relevant data, and
10 draw appropriate statistical conclusions.

11 **“SEC. 5652. AUTHORIZATION OF APPROPRIATIONS.**

12 “(a) IN GENERAL.—There are authorized to be ap-
13 propriated such sums as may be necessary to carry out
14 this subpart.

15 “(b) AVAILABILITY.—Any amounts appropriated
16 under subsection (a) are authorized to remain available
17 until expended.

18 “(c) RESERVATION.—Of any amounts appropriated
19 under subsection (a) for a fiscal year, the Secretary shall
20 reserve not more than 10 percent to carry out chapter C.”.

21 (b) CONFORMING AMENDMENTS.—The table of con-
22 tents of such Act is amended by inserting after the item
23 relating to section 5618 the following:

Sec. 1. Short title.

Sec. 2. Findings.

Sec. 3. Statistical literacy education.

“SUBPART 22—STATISTICAL LITERACY EDUCATION

“CHAPTER A—STATISTICAL LITERACY PLANS

- “Sec. 5621. Plan required; Development, submission, and approval.
- “Sec. 5622. Grants for development of plan.

“CHAPTER B—STATISTICS EDUCATION PROFESSIONAL DEVELOPMENT
GRANTS

- “Sec. 5631. Purpose.
- “Sec. 5632. Formula grants to States.
- “Sec. 5633. Competitive subgrants to eligible partnerships.
- “Sec. 5634. Eligible partnership defined.

“CHAPTER C—STATISTICS EDUCATION GRANTS TO BUILD NATIONAL
CAPACITY

- “Sec. 5641. Purpose.
- “Sec. 5642. Grant program.
- “Sec. 5643. Eligible entity defined.

“CHAPTER D—GENERAL PROVISIONS

- “Sec. 5651. Statistical literacy defined.
- “Sec. 5652. Authorization of appropriations.