

112TH CONGRESS
1ST SESSION

H. R. 1817

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

MAY 10, 2011

Mr. LOEBACK introduced the following bill; which was referred to the
Committee on Education and the Workforce

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,*

3 **SECTION 1. SHORT TITLE.**

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

1 **SEC. 2. FINDINGS.**

2 The Congress finds the following:

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

8 (A) ask and evaluate critical questions
9 about the design of a study and the appro-
10 priateness of the conclusions drawn from a
11 study;

12 (B) distinguish arguments based on data
13 and evidence from arguments based on anec-
14 dotes;

15 (C) recognize and interpret different rep-
16 resentations of data in context; and

17 (D) formulate questions that can be ad-
18 dressed with data, collect and organize relevant
19 data, and draw appropriate statistical conclu-
20 sions.

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

24 (A) interpret and synthesize data displays
25 and summaries, such as polls, surveys, and
26 study outcomes; and

1 (B) critically evaluate claims based on
2 data—

- 3 (i) as a consumer of the news media;
4 (ii) in making medical decisions; and
5 (iii) in making financial decisions,
6 such as decisions related to a mortgage or
7 a car repair.

8 (3) Statistics provides tools for describing varia-
9 bility and uncertainty to support making informed
10 decisions, both large and small. A foundation in sta-
11 tistical thinking helps individuals to evaluate risks
12 and weigh the likelihood of various outcomes.

13 (4) Statistical literacy provides tools for dealing
14 with uncertainty. There is uncertainty in virtually
15 every situation and number individuals face, but sta-
16 tistical literacy enables individuals to make rational
17 decisions in the face of uncertainty.

18 (5) Statistical concepts are important for the
19 study of mathematics, the natural sciences, and the
20 social sciences. In mathematics, statistical literacy
21 provides applications and real-life illustrations of the
22 importance of mathematics, which motivates stu-
23 dents for deeper learning. In the natural sciences
24 and the social sciences, statistical problem-solving

1 teaches a framework for the scientific process and
2 an understanding of data and their limitations.

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

5 (A) produce graduates better equipped
6 with the skills necessary to compete in the
7 workforce of the 21st century, with its bur-
8 geoning growth of and dependence on data;

9 (B) enhance student learning and problem-
10 solving skills across disciplines; and

11 (C) equip students with knowledge needed
12 to be responsible and engaged citizens.

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

15 (A) While national mathematics standards
16 and benchmarks from organizations such as
17 Achieve, the College Board, and the National
18 Council for Teachers of Mathematics support
19 data analysis and probability as essential com-
20 ponents of mathematics education, many ele-
21 mentary and secondary school teachers have not
22 received the necessary training at the appro-
23 priate level to teach statistical literacy in their
24 classrooms.

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

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

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

22 (E) Teachers do not yet have access to ma-
23 terials supported by statistics education re-
24 search.

1 **SEC. 3. STATISTICAL LITERACY EDUCATION.**

2 (a) IN GENERAL.—Part D of title V of the Elemen-
 3 tary and Secondary Education Act of 1965 (20 U.S.C.
 4 7241 et seq.) is amended by adding at the end the fol-
 5 lowing new subpart:

6 **“Subpart 22—Statistical Literacy Education**

7 **“CHAPTER A—STATISTICAL LITERACY**

8 **PLANS**

9 **“SEC. 5621. PLAN REQUIRED; DEVELOPMENT, SUBMISSION,**
 10 **AND APPROVAL.**

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

15 “(b) DEVELOPMENT.—

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

18 “(A) consult with the Statistical Literacy
 19 Advisory Panel established by the State edu-
 20 cational agency under paragraph (2)(A); and

21 “(B) seek input from the public.

22 “(2) STATISTICAL LITERACY ADVISORY
 23 PANEL.—

24 “(A) IN GENERAL.—A State educational
 25 agency developing a statistical literacy plan
 26 shall establish a Statistical Literacy Advisory

1 Panel to advise the State educational agency on
2 the contents of the plan.

3 “(B) COMPOSITION OF PANEL.—A Statis-
4 tical Literacy Advisory Panel of a State edu-
5 cational agency shall include the following mem-
6 bers, to be appointed by the State educational
7 agency:

8 “(i) One member from the State edu-
9 cational agency and 1 member from a local
10 educational agency within the State.

11 “(ii) Two statisticians from institu-
12 tions of higher education, at least 1 of
13 whom has expertise in teaching statistics
14 education.

15 “(iii) Two teachers from public ele-
16 mentary schools or public secondary
17 schools, 1 of whom teaches a grade that is
18 not higher than the 8th grade and 1 of
19 whom teaches a grade that is not lower
20 than the 9th grade and not higher than
21 the 12th grade.

22 “(iv) One member from a teacher
23 training department or professional devel-
24 opment center of an institution of higher

1 education who has expertise in statistics or
2 mathematics education.

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

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

16 “(c) APPROVAL.—

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

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

24 “(B) if the plan does not meet such cri-
25 teria, inform the State educational agency of

1 any deficiencies in the plan and implement the
2 process described in paragraph (3).

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

5 “(A) The State educational agency certifies
6 to the Secretary that the plan was developed in
7 accordance with subsection (b).

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

10 “(C) Implementation of the plan will—

11 “(i) achieve the objectives described in
12 subsection (e); and

13 “(ii) ensure statistical literacy appro-
14 priate to the grade-level of all students in
15 elementary schools and secondary schools
16 served by the State educational agency.

17 “(3) PROCEDURE IF PLAN INADEQUATE.—

18 “(A) NOTICE AND OPPORTUNITY FOR RE-
19 VISION.—The Secretary may not deny approval
20 of a statistical literacy plan submitted by a
21 State educational agency under paragraph (1)
22 unless the Secretary has first—

23 “(i) informed the agency of any defi-
24 ciencies in the plan;

1 “(ii) provided the agency with an op-
2 portunity for a hearing on such defi-
3 ciencies;

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

7 “(iv) offered the agency technical as-
8 sistance in revising the plan.

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

18 “(4) STATE ACADEMIC CONTENT STANDARDS
19 AND ASSESSMENTS.—The Secretary may not, as a
20 condition of approval under this subsection of a sta-
21 tistical literacy plan of a State educational agency,
22 require that the State educational agency—

23 “(A) include in or delete from the statis-
24 tical literacy plan one or more specific elements

1 of the academic content standards adopted
2 under section 1111(b)(1)(A); or

3 “(B) use specific instruments or items for
4 academic assessment.

5 “(5) PEER REVIEW BOARD.—

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

13 “(B) MEMBERSHIP.—The Peer Review
14 Board shall be composed of a number of mem-
15 bers to be determined by the Secretary, to be
16 appointed by the Secretary. The Secretary shall
17 appoint members that—

18 “(i) are representative of parents,
19 teachers, State educational agencies, local
20 educational agencies, and nongovernmental
21 organizations; and

22 “(ii) are familiar with current issues
23 in the field of statistics and statistics edu-
24 cation and with the statistics education
25 needs of students.

1 “(C) COMPENSATION.—

2 “(i) IN GENERAL.—Except as pro-
3 vided in clause (ii), members of the Peer
4 Review Board shall serve without com-
5 pensation.

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

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

14 “(1) A description of how the State educational
15 agency will measure the statistical literacy of stu-
16 dents, including—

17 “(A) challenging State academic content
18 standards and student academic achievement
19 standards in statistics education, and how sta-
20 tistics education instruction will be integrated
21 throughout the curriculum used in elementary
22 schools and secondary schools; and

23 “(B) a description of the relationship of
24 the plan to the secondary school graduation re-
25 quirements of the State.

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

3 “(A) statistical subject-matter knowledge;
4 and

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

7 “(i) interdisciplinary and research-
8 based learning; and

9 “(ii) innovative technology in the
10 classroom.

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

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

16 “(1) To prepare students to make informed de-
17 cisions in the face of uncertainty, including decisions
18 related to personal finance, using statistical rea-
19 soning necessary to interpret data and critically
20 evaluate claims based on data.

21 “(2) To provide experiences that incorporate
22 statistics into the regular school curriculum and to
23 create programs that teach statistical problem-solv-
24 ing as an investigative process, including experiences
25 and programs that—

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

3 “(B) emphasize concepts over formulas,
4 using real-world data;

5 “(C) stress the importance of context in
6 problem-solving;

7 “(D) recognize the omnipresence of varia-
8 bility; and

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

11 “(3) To create opportunities for enhanced and
12 ongoing professional development for teachers that
13 improves—

14 “(A) statistical subject-matter knowledge;

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

17 “(i) interdisciplinary and research-
18 based learning; and

19 “(ii) innovative technology in the
20 classroom; and

21 “(C) the ability of teachers to collect, orga-
22 nize, analyze, and interpret classroom data to
23 inform instruction and evaluate student
24 progress in statistical literacy.

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

6 “(1) not later than 4 years after the date of the
7 approval of the plan and every 4 years thereafter;
8 and

9 “(2) at any other time the agency considers
10 modification of the plan to be necessary to ensure
11 that the plan continues to achieve the objectives de-
12 scribed in subsection (e).

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

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

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

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

3 “(B) be based on evaluation activities con-
4 ducted by the State educational agency on a
5 regular basis throughout implementation of the
6 plan.

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

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

11 “(a) AUTHORIZATION.—The Secretary may make
12 grants on a competitive basis to State educational agencies
13 for the development of statistical literacy plans required
14 by section 5621(a).

15 “(b) ELIGIBILITY.—The Secretary may only make a
16 grant under subsection (a) to a State educational agency
17 that—

18 “(1) the Secretary determines lacks the re-
19 sources to develop an adequate statistical literacy
20 plan; and

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

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

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

4 “(2) if the Secretary finds any deficiencies in
5 the plan, submit a revised plan in accordance with
6 the procedures described in subsection (c)(3) of such
7 section; and

8 “(3) not later than 30 days after the Secretary
9 approves the plan, apply for a grant under section
10 5632(a).

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

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

16 **“CHAPTER B—STATISTICS EDUCATION**
17 **PROFESSIONAL DEVELOPMENT GRANTS**

18 **“SEC. 5631. PURPOSE.**

19 “The purpose of this chapter is to ensure the aca-
20 demic achievement of students in statistical literacy
21 through the professional development of teachers and
22 other education professionals.

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

24 “(a) AUTHORIZATION.—Using the allocation formula
25 developed under subsection (b), the Secretary shall make

1 one or more grants to each State educational agency that
2 has a statistical literacy plan approved under section
3 5621(c) and submits an application for a grant under this
4 subsection to enable each such agency to award subgrants
5 to eligible partnerships under section 5633(a).

6 “(b) REGULATIONS.—The Secretary shall promul-
7 gate regulations to implement this chapter. Such regula-
8 tions shall include the formula by which the Secretary will
9 allocate grants to State educational agencies under sub-
10 section (a).

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

15 **“SEC. 5633. COMPETITIVE SUBGRANTS TO ELIGIBLE PART-**
16 **NERSHIPS.**

17 “(a) AUTHORIZATION.—From funds received under
18 section 5632(a), a State educational agency shall make
19 grants, on a competitive basis, to eligible partnerships to
20 enable the eligible partnerships to carry out the activities
21 described in subsection (c), consistent with the statistical
22 literacy plan of the State educational agency.

23 “(b) ELIGIBILITY.—

24 “(1) IN GENERAL.—A State educational agency
25 may not award a grant under subsection (a) to an

1 eligible partnership unless the eligible partnership
2 submits to the State educational agency an applica-
3 tion at such time, in such form, and containing such
4 information and assurances as the State educational
5 agency may require, including the contents described
6 in paragraph (2).

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

9 “(A) The results of a comprehensive as-
10 sessment of the teacher quality and professional
11 development needs, with respect to the teaching
12 and learning of statistical content, of the enti-
13 ties served by the eligible partnership.

14 “(B) An explanation of how the activities
15 to be carried out by the eligible partnership are
16 expected to improve student academic achieve-
17 ment and strengthen the quality of statistical
18 instruction at schools served by the eligible
19 partnership.

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

22 “(i) will be aligned with challenging
23 State academic content standards and stu-
24 dent academic achievement standards in
25 statistics education and with the statistical

1 literacy plan of the State educational agen-
2 cy approved under section 5621(c); and

3 “(ii) will advance the teaching of
4 interdisciplinary courses that integrate sta-
5 tistics into the study of natural, social, and
6 economic systems.

7 “(D) A description of how the eligible part-
8 nership will carry out the activities described in
9 subsection (c).

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

18 “(F) A description of how the eligible part-
19 nership will continue the activities carried out
20 with grant funds after the grant period has ex-
21 pired.

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

1 “(1) Creating opportunities for enhanced and
2 ongoing professional development of teachers that
3 improves the statistical subject-matter knowledge of
4 such teachers.

5 “(2) Creating opportunities for enhanced and
6 ongoing professional development of teachers that
7 improves pedagogical skills in teaching statistical
8 concepts, including in the use of—

9 “(A) interdisciplinary and research-based
10 learning; and

11 “(B) innovative classroom technology.

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

18 “(4) Developing or redesigning more rigorous
19 statistics education curricula that—

20 “(A) are aligned with challenging State
21 academic content standards and student aca-
22 demic achievement standards in statistics edu-
23 cation and with the statistical literacy plan of
24 the State educational agency; and

1 “(B) advance the teaching of interdiscipli-
2 nary courses that integrate statistics in the
3 teaching of mathematics, science, economics, fi-
4 nance and financial literacy, and social studies.

5 “(5) Designing programs to prepare the teach-
6 ers at a school to provide mentoring and professional
7 development to other teachers at such school to im-
8 prove teacher statistics education subject-matter and
9 pedagogical skills.

10 “(6) Establishing and operating programs to
11 bring teachers into contact with working profes-
12 sionals in statistical fields to expand the subject-
13 matter knowledge of such teachers regarding statisti-
14 cal concepts and the research by such teachers on
15 statistical issues.

16 “(7) Creating initiatives that seek to incor-
17 porate statistics education into teacher training pro-
18 grams or accreditation standards consistent with the
19 statistical literacy plan of the State educational
20 agency.

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

23 “(e) SUPPLEMENT, NOT SUPPLANT.—An eligible
24 partnership receiving a grant under subsection (a) shall
25 use such funds to supplement, not supplant, funds that

1 would otherwise be used for the activities described in sub-
2 section (c).

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

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

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

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

23 “(1) The teacher training department or profes-
24 sional development center of an institution of higher
25 education.

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

3 “(3) Another local educational agency, a public
4 elementary school or a public secondary school (in-
5 cluding a public charter school), or a consortium of
6 such schools.

7 “(4) A Federal, State, regional, or local statis-
8 tical agency that has demonstrated effectiveness in
9 improving the quality of statistics education teach-
10 ers.

11 **“CHAPTER C—STATISTICS EDUCATION**
12 **GRANTS TO BUILD NATIONAL CAPACITY**

13 **“SEC. 5641. PURPOSE.**

14 “The purpose of this chapter is to strengthen statis-
15 tics education as an integral part of the curriculum of ele-
16 mentary schools and secondary schools in the United
17 States.

18 **“SEC. 5642. GRANT PROGRAM.**

19 “(a) AUTHORIZATION.—From amounts reserved
20 under section 5652(c), the Secretary may make grants,
21 on a competitive basis, to eligible entities to enable the
22 eligible entities to carry out activities described in sub-
23 section (c).

24 “(b) ELIGIBILITY.—The Secretary may only make a
25 grant under subsection (a) to an eligible entity that sub-

1 mits to the Secretary an application at such time, in such
2 form, and containing such information and assurances as
3 the Secretary may require, including a description of how
4 the entity will use grant funds to carry out 1 or more of
5 the activities described in subsection (c).

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

9 “(1) Developing model State standards and cur-
10 riculum frameworks for statistics education that
11 meet challenging academic content standards and
12 student academic achievement standards for statis-
13 tics education.

14 “(2) Replicating or disseminating information
15 about proven and tested model statistics education
16 programs that provide interdisciplinary instruction
17 that integrates statistics in mathematics, science, ec-
18 onomics, and social studies.

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

22 “(4) Conducting studies of national significance
23 that—

1 “(A) provide a comprehensive, systematic,
2 and formal assessment of the state of statistics
3 education in the United States;

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

7 “(C) evaluate the effectiveness of statistics
8 education in improving student academic
9 achievement in mathematics, science, and other
10 core academic subjects.

11 “(5) Conducting projects that advance wide-
12 spread adoption by State educational agencies and
13 local educational agencies of statistics education con-
14 tent standards.

15 “(d) DURATION.—A grant under subsection (a) shall
16 be for a period of not less than 1 year and not more than
17 5 years.

18 “(e) REPORTS.—

19 “(1) BY ELIGIBLE ENTITY TO SECRETARY.—
20 Not later than 90 days after the end of each year
21 in which an eligible entity receives a grant under
22 subsection (a), the eligible entity shall submit to the
23 Secretary a report that—

1 “(A) describes the activities carried out by
2 the eligible entity using grant funds during the
3 year covered by the report; and

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

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

15 “(A) describes the activities carried out by
16 eligible entities using grants under subsection
17 (a);

18 “(B) evaluates the success of such activi-
19 ties in improving national and State statistics
20 education capacity; and

21 “(C) makes such recommendations as the
22 Secretary considers appropriate to promote the
23 continuation and improvement of such activi-
24 ties.

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

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

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

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

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

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

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

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

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

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

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

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

18 **“CHAPTER D—GENERAL PROVISIONS**

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

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

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

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

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

5 “(4) formulate questions that can be addressed
6 with data, collect and organize relevant data, and
7 draw appropriate statistical conclusions.

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

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

12 “(b) AVAILABILITY.—Any amounts appropriated
13 under subsection (a) are authorized to remain available
14 until expended.

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

18 (b) CONFORMING AMENDMENTS.—The table of con-
19 tents of such Act is amended by inserting after the item
20 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.

