

“(3) Women remain widely underrepresented in the STEM workforce, and this disparity extends down through all levels of education.”

SUPPORTING EARLY CHILDHOOD AND ELEMENTARY
STEM EDUCATION RESEARCH

Pub. L. 116-102, §3, Dec. 24, 2019, 133 Stat. 3263, provided that: “In awarding grants under the Discovery Research PreK-12 program, the Director of the National Science Foundation shall consider the age distribution of a STEM education research and development project to improve the focus of research and development on elementary and prekindergarten education.”

DEFINITIONS

For definitions of terms used in this section, see section 2 of Pub. L. 114-329, set out as a note under section 1862s of this title.

§ 1862s-6. Presidential awards for excellence in STEM mentoring

(a) In general

The Director of the Foundation shall continue to administer awards on behalf of the Office of Science and Technology Policy to recognize outstanding mentoring in STEM fields.

(b) Annual award recipients

The Director of the Foundation shall provide Congress with a list of award recipients, including the name, institution, and a brief synopsis of the impact of the mentoring efforts.

(Pub. L. 114-329, title III, §307, Jan. 6, 2017, 130 Stat. 3010.)

Editorial Notes

CODIFICATION

Section was enacted as part of the American Innovation and Competitiveness Act, and not as part of the National Science Foundation Act of 1950 which comprises this chapter.

Statutory Notes and Related Subsidiaries

PRESIDENTIAL AWARDS FOR EDUCATORS AND MENTORS
IN FIELDS RELATING TO CYBERSECURITY

Pub. L. 116-283, div. H, title XCIV, §9405(d), Jan. 1, 2021, 134 Stat. 4812, provided that: “The Director of the National Science Foundation shall ensure that educators and mentors in fields relating to cybersecurity can be considered for—

“(1) Presidential Awards for Excellence in Mathematics and Science Teaching made under section 117 of the National Science Foundation Authorization Act of 1988 (42 U.S.C. 1881b); and

“(2) Presidential Awards for Excellence in STEM Mentoring administered under section 307 of the American Innovation and Competitiveness Act (42 U.S.C. 1862s-6).”

DEFINITIONS

For definitions of terms used in this section, see section 2 of Pub. L. 114-329, set out as a note under section 1862s of this title.

§ 1862s-7. Computer science education research

(a) Findings

Congress finds that as the lead Federal agency for building the research knowledge base for computer science education, the Foundation is well positioned to make investments that will accelerate ongoing efforts to enable rigorous

and engaging computer science throughout the Nation as an integral part of STEM education.

(b) Grant program

(1) In general

The Director of the Foundation shall award grants to eligible entities to research computer science and cybersecurity education and computational thinking.

(2) Research

The research described in paragraph (1) may include the development or adaptation, piloting or full implementation, and testing of—

(A) models of preservice preparation for teachers who will teach computer science and computational thinking;

(B) scalable and sustainable models of professional development and ongoing support for the teachers described in subparagraph (A);

(C) tools and models for teaching and learning aimed at supporting student success and inclusion in computing within and across diverse populations, particularly poor, rural, and tribal populations and other populations that have been historically underrepresented in computer science and STEM fields;

(D) high-quality learning opportunities for teaching computer science and, especially in poor, rural, or tribal schools at the elementary school and middle school levels, for integrating computational thinking into STEM teaching and learning; and

(E) tools and models for the integration of cybersecurity and other interdisciplinary efforts into computer science education and computational thinking at secondary and postsecondary levels of education.

(3) Uses of funds

The tools and models described in paragraph (2)(C) may include—

(A) offering training and professional development programs, including summer or academic year institutes or workshops, designed to strengthen the capabilities of prekindergarten and elementary school teachers and to familiarize such teachers with the role of bias against female students in the classroom;

(B) offering innovative pre-service and in-service programs that instruct teachers on female-inclusive practices for teaching computing concepts;

(C) developing distance learning programs for teachers or students, including developing curricular materials, play-based computing activities, and other resources for the in-service professional development of teachers that are made available to teachers through the Internet;

(D) developing or adapting prekindergarten and elementary school computer science curricular materials that incorporate contemporary research on the science of learning, particularly with respect to female inclusion;

(E) developing and offering female-inclusive computer science enrichment programs for students, including after-school and summer programs;

(F) providing mentors for female students in prekindergarten through elementary school to support such students in participating in computer science activities;

(G) engaging female students in prekindergarten through elementary school, and their guardians (if such communication takes place on school premises during otherwise-scheduled conferences or formal conversations between teachers and guardians) about—

(i) the difficulties faced by female students with regard to maintaining an interest in participating in computer science activities; and

(ii) the potential positive career benefits of engaging in such activities;

(H) acquainting female students in prekindergarten through elementary school with careers in computer science and encouraging such students to consider careers in the computer science field; and

(I) developing tools to evaluate activities conducted under this subsection, including reports for evaluating the effectiveness of activities under this section.

(c) Collaborations

In carrying out the grants established in subsection (b), eligible entities may collaborate and partner with local or remote schools to support the integration of computing, cybersecurity, and computational thinking within pre-kindergarten through grade 12 STEM curricula and instruction.

(d) Metrics

The Director of the Foundation shall develop metrics to measure the success of the grant program funded under this section in achieving program goals.

(e) Report

The Director of the Foundation shall report, in the annual budget submission to Congress, on the success of the program as measured by the metrics in subsection (d).

(f) Definition of eligible entity

In this section, the term “eligible entity” means an institution of higher education or a nonprofit research organization.

(Pub. L. 114–329, title III, § 310, Jan. 6, 2017, 130 Stat. 3012; Pub. L. 116–102, § 5, Dec. 24, 2019, 133 Stat. 3264; Pub. L. 116–283, div. H, title XCIV, § 9405(a), Jan. 1, 2021, 134 Stat. 4812.)

Editorial Notes

CODIFICATION

Section was enacted as part of the American Innovation and Competitiveness Act, and not as part of the National Science Foundation Act of 1950 which comprises this chapter.

AMENDMENTS

2021—Subsec. (b)(1). Pub. L. 116–283, § 9405(a)(1)(A), inserted “and cybersecurity” after “computer science”.

Subsec. (b)(2)(E). Pub. L. 116–283, § 9405(a)(1)(B), added subpar. (E).

Subsec. (c). Pub. L. 116–283, § 9405(a)(2), inserted “, cybersecurity,” after “computing”.

2019—Subsec. (b)(3). Pub. L. 116–102 added par. (3).

Statutory Notes and Related Subsidiaries

DEFINITIONS

For definitions of terms used in this section, see section 2 of Pub. L. 114–329, set out as a note under section 1862s of this title.

§ 1862s–8. Innovation Corps

(a) Findings

Congress makes the following findings:

(1) The National Science Foundation Innovation Corps (referred to in this section as the “I-Corps”) was established to foster a national innovation ecosystem by encouraging institutions, scientists, engineers, and entrepreneurs to identify and explore the innovation and commercial potential of National Science Foundation-funded research well beyond the laboratory.

(2) Through I-Corps, the Foundation invests in entrepreneurship and commercialization education, training, and mentoring that can ultimately lead to the practical deployment of technologies, products, processes, and services that improve the Nation’s competitiveness, promote economic growth, and benefit society.

(3) By building networks of entrepreneurs, educators, mentors, institutions, and collaborations, and supporting specialized education and training, I-Corps is at the leading edge of a strong, lasting foundation for an American innovation ecosystem.

(4) By translating federally funded research to a commercial stage more quickly and efficiently, programs like the I-Corps create new jobs and companies, help solve societal problems, and provide taxpayers with a greater return on their investment in research.

(5) The I-Corps program model has a strong record of success that should be replicated at all Federal science agencies.

(b) Sense of Congress

It is the sense of Congress that—

(1) commercialization of federally funded research can improve the Nation’s competitiveness, grow the economy, and benefit society;

(2) I-Corps is a useful tool in promoting the commercialization of federally funded research by training researchers funded by the Foundation in entrepreneurship and commercialization;

(3) I-Corps should continue to build a network of entrepreneurs, educators, mentors, and institutions and support specialized education and training;

(4) researchers other than those funded by the Foundation may also benefit from the education and training described in paragraph (3); and

(5) I-Corps should continue to promote a strong innovation system by investing in and supporting female entrepreneurs through mentorship, education, and training because they are historically underrepresented in entrepreneurial fields.

(c) I-Corps program

(1) In general

In order to promote a strong, lasting foundation for the national innovation ecosystem