matics and science teachers teaching in high need local educational agencies and whether there continue to exist significant shortages of such teachers in high need local educational agencies.

(Pub. L. 107–368, § 10, Dec. 19, 2002, 116 Stat. 3049; Pub. L. 110–69, title VII, § 7030, Aug. 9, 2007, 121 Stat. 698; Pub. L. 114–59, § 4(b), Oct. 7, 2015, 129 Stat. 541; Pub. L. 115–91, div. A, title XVI, § 1649C, Dec. 12, 2017, 131 Stat. 1756; Pub. L. 115–303, § 2(a)(1), Dec. 11, 2018, 132 Stat. 4399.)

REFERENCES IN TEXT

The Higher Education Act of 1965, referred to in subsec. (g)(2)(C), is Pub. L. 89–329, Nov. 8, 1965, 79 Stat. 1219. Parts B and D of title IV of the Act are classified to parts B (§ 1071 et seq.) and D (§ 1087a et seq.), respectively, of subchapter IV of chapter 28 of Title 20, Education. For complete classification of this Act to the Code, see Short Title note set out under section 1001 of Title 20 and Tables.

CODIFICATION

Section 7030 of Pub. L. 110–69, which directed that ''Section 10 of the National Science Foundation Authorization Act of 2002 (42 U.S.C. 1862n–1) is amended to read as follows:'' and then set out the text of sections 10 and 10A, was executed by generally amending section 10 and adding a new section 10A (42 U.S.C. 1862n–1a) after section 10, to reflect the probable intent of Congress.

Section was enacted as part of the National Science Foundation Authorization Act of 2002, and not as part of the National Science Foundation Act of 1950 which comprises this chapter.

AMENDMENTS

2018—Subsec. (a)(3)(A)(iv). Pub. L. 115–303 inserted '', including research experiences at national laboratories and NASA centers'' before semicolon.

2017—Subsec. (i)(5). Pub. L. 115–91, § 1649C(1), amended par. (5) generally. Prior to amendment, par. (5) read as follows: ''the term 'mathematics and science teacher' means a science, computer science, technology, engineering, or mathematics teacher at the elementary school or secondary school level;''.

Subsec. (i)(7). Pub. L. 115–91, § 1649C(2), amended par. (7) generally. Prior to amendment, par. (7) read as follows: ''the term 'science, technology, engineering, or mathematics professional' means a person who holds a baccalaureate, master's, or doctoral degree in science, technology, engineering, or mathematics, and is working in or had a career in such field or a related area; and''.

2015—Subsec. (i)(5). Pub. L. 114–59 inserted ''computer science,'' after ''means a science,''.

2007—Pub. L. 110–69 amended section generally, substituting provisions relating to the Robert Noyce Teacher Scholarship Program, consisting of subsecs. (a) to (*l*), for former provisions relating to the Robert Noyce Scholarship Program, consisting of subsecs. (a) to (i). See Codification note above.

CHANGE OF NAME

Committee on Science and Technology of House of Representatives changed to Committee on Science, Space, and Technology of House of Representatives by House Resolution No. 5, One Hundred Twelfth Congress, Jan. 5, 2011.

EFFECTIVE DATE OF 2018 AMENDMENT

Pub. L. 115–303, § 2(b), Dec. 11, 2018, 132 Stat. 4399, provided that: ''The amendments made by subsection (a) [amending this section and section 1862n–1a of this title] shall apply with respect to grants awarded on or after October 1, 2018.''

DEFINITIONS

For definitions of terms used in this section, see section 4 of Pub. L. 107–368, set out as a note under section 1862n of this title.

§ 1862n–1a. National Science Foundation Teaching Fellowships and Master Teaching Fellowships

(a) In general

(1) Grants

(A) In general

As part of the Robert Noyce Teacher Scholarship Program established under section 1862n–1 of this title, the Director shall establish a separate program to award grants to eligible entities to enable such entities to administer fellowships in accordance with this section.

(B) Definitions

The terms used in this section have the meanings given the terms in section 1862n–1 of this title.

(2) Fellowships

Fellowships under this section shall be available only to—

(A) science, technology, engineering, or mathematics professionals, including retiring professionals in those fields, who shall be referred to as ''National Science Foundation Teaching Fellows'' and who, in the first year of the fellowship, are enrolled in a master's degree program leading to teacher certification or licensing; and

(B) mathematics and science teachers, who shall be referred to as ''National Science Foundation Master Teaching Fellows'' and who possess a master's or bachelor's degree in their field.

(b) Eligibility

In order to be eligible to receive a grant under this section, an eligible entity shall enter into a partnership that shall include—

(1) a department within an institution of higher education participating in the partnership that provides an advanced program of study in mathematics and science;

(2)(A) a school or department within an institution of higher education participating in the partnership that provides a teacher preparation program; or

(B) a 2-year institution of higher education that has a teacher preparation offering or a dual enrollment program with an institution of higher education participating in the partnership;

(3) not less than 1 high need local educational agency and a public school or a consortium of public schools served by the agency; and

(4) 1 or more nonprofit organizations that have a demonstrated record of capacity to provide expertise or support to meet the purposes of this section.

(c) Use of grants

Grants awarded under this section shall be used by the eligible entity (and participating institutions of higher education of the consor-

tium, if applicable) to develop and implement a program for National Science Foundation Teaching Fellows or National Science Foundation Master Teaching Fellows, through—

(1) administering fellowships in accordance with this section, including providing the teaching fellowship salary supplements described in subsection (f);

(2) in the case of National Science Foundation Teaching Fellowships—

(A) offering academic courses and clinical teaching experiences leading to a master's degree and designed to prepare individuals to teach in elementary schools and secondary schools, including such preparation as is necessary to meet the requirements for certification or licensing; and

(B) offering programs both during and after matriculation in the program for which the fellowship is received to enable fellows to become highly effective mathematics and science teachers, including mentoring, training, induction, and professional development activities, to fulfill the service requirements of this section, including the requirements of subsection (e), and to exchange ideas with others in their fields;

(3) in the case of National Science Foundation Master Teaching Fellowships for teachers with master's degrees in their field—

(A) offering academic courses and leadership training to prepare individuals to become master teachers in elementary schools and secondary schools; and

(B) offering programs both during and after matriculation in the program for which the fellowship is received to enable fellows to become highly effective mathematics and science teachers, including mentoring, training, induction, and professional development activities, to fulfill the service requirements of this section, including the requirements of subsection (e), and to exchange ideas with others in their fields; and

(4) in the case of National Science Foundation Master Teaching Fellowships for teachers with bachelor's degrees in their field and working toward a master's degree—

(A) offering academic courses leading to a master's degree and leadership training to prepare individuals to become master teachers in elementary and secondary schools;

(B) offering programs both during and after matriculation in the program for which the fellowship is received to enable fellows to become highly effective mathematics and science teachers, including mentoring, training, induction, and professional development activities, to fulfill the service requirements of this section, including the requirements of subsection (e), and to exchange ideas with others in their fields; and

(C) providing internship opportunities for fellows, including research experiences at national laboratories and NASA Centers.

(d) Selection process

(1) Merit review

Grants shall be awarded under this section on a competitive, merit-reviewed basis.

(2) Applications

An eligible entity desiring a grant under this section shall submit an application to the Director at such time, in such manner, and containing such information as the Director may require. The application shall include, at a minimum—

(A) in the case of an applicant that is submitting an application on behalf of a consortium of institutions of higher education, a description of the participating institutions of higher education and the roles and responsibilities of each such institution;

(B) a description of the program that the applicant intends to operate, including the number of fellowships the applicant intends to award, the type of activities proposed for the recruitment of students to the program, and the amount of the teaching fellowship salary supplements to be provided in accordance with subsection (f);

(C) evidence that the applicant has the capability to administer the program in accordance with the provisions of this section, which may include a description of any existing programs at the applicant eligible entity (and participating institutions of higher education of the consortium, if applicable) that are targeted to the education of mathematics and science teachers and the number of teachers graduated annually from such programs;

(D) in the case of National Science Foundation Teaching Fellowships, a description of—

(i) the selection process that will be used in awarding fellowships, including a description of the rigorous measures to be used, including the rigorous, nationally recognized assessments to be used, in order to determine whether individuals applying for fellowships have advanced content knowledge of science, technology, engineering, or mathematics;

(ii) the academic courses and clinical teaching experiences described in subsection (c)(2)(A), including—

(I) a description of an educational program that will enable a student to obtain a master's degree and teacher certification or licensing within 1 year; and

(II) evidence of agreements between the applicant and the schools or local educational agencies that are identified as the locations at which clinical teaching experiences will occur;

(iii) a description of the programs described in subsection (c)(2)(B), including activities to assist individuals in fulfilling their service requirements under this section;

(E) evidence that the eligible entity will provide the teaching supplements required under subsection (f); and

(F) a description of the process the applicant will use to fulfill the requirements of section 1862n–1(f) of this title.

(3) Criteria

In evaluating the applications submitted under paragraph (2), the Director shall consider, at a minimum—

(A) the ability of the applicant (and participating institutions of higher education of the consortium, if applicable) to effectively carry out the program and to meet the requirements of subsection (f);

(B) the extent to which the mathematics, science, or engineering faculty and the education faculty at the eligible entity (and participating institutions of higher education of the consortium, if applicable) have worked or will work collaboratively to design new or revised curricula that recognizes the specialized pedagogy required to teach science, technology, engineering, and mathematics effectively in elementary schools and secondary schools;

(C) the extent to which the applicant (and participating institutions of higher education of the consortium, if applicable) is committed to making the program a central organizational focus;

(D) the degree to which the proposed programming will enable participants to become highly effective mathematics and science teachers and prepare such participants to assume leadership roles in their schools, in addition to their regular classroom duties, including serving as mentor or master teachers, developing curriculum, and assisting in the development and implementation of professional development activities;

(E) the number and quality of the individuals that will be served by the program; and

(F) in the case of the National Science Foundation Teaching Fellowship, the ability of the applicant (and participating institutions of higher education of the consortium, if applicable) to recruit individuals who would otherwise not pursue a career in teaching and individuals identified in section 1885a or 1885b of this title.

(4) Selection of fellows

(A) In general

Individuals shall be selected to receive fellowships under this section primarily on the basis of—

(i) professional achievement;

(ii) academic merit;

(iii) content knowledge of science, technology, engineering, or mathematics, as demonstrated by their performance on an assessment in accordance with paragraph (2)(D)(i); and

(iv) in the case of National Science Foundation Master Teaching Fellows, demonstrated success in improving student academic achievement in science, technology, engineering, or mathematics.

(B) Promoting participation of certain individuals

Among individuals demonstrating equivalent qualifications, consideration may be given to the goal of promoting the participation of individuals identified in section 1885a or 1885b of this title.

(e) Duties of National Science Foundation Teaching Fellows and Master Teaching Fellows

A National Science Foundation Teaching Fellow or a National Science Foundation Master Teaching Fellow, while fulfilling the service obligation under subsection (h) and in addition to regular classroom activities, shall take on a leadership role within the school or local educational agency in which the fellow is employed, as defined by the partnership according to such fellow's expertise, including serving as a mentor or master teacher, developing curricula, and assisting in the development and implementation of professional development activities.

(f) Teaching fellowship salary supplements

(1) In general

An eligible entity receiving a grant under this section shall provide salary supplements to individuals who participate in the program under this section during the period of their service obligation under subsection (h). A local educational agency through which the service obligation is fulfilled shall agree not to reduce the base salary normally paid to an individual solely because such individual receives a salary supplement under this subsection.

(2) Amount and duration

(A) Amount

Salary supplements provided under paragraph (1) shall be not less than $10,000 per year, except that, in the case of a National Science Foundation Teaching Fellow, while enrolled in the master's degree program as described in subsection (c)(2)(A), such fellow shall receive not more than the cost of attendance at such fellow's institution.

(B) Support while enrolled in master's degree program

A National Science Foundation Teaching Fellow may receive a maximum of 1 year of fellowship support while enrolled in a master's degree program as described in subsection (c)(2)(A), except that if such fellow is enrolled in a part-time program, such amount shall be prorated according to the length of the program.

(C) Duration of support

An eligible entity receiving a grant under this section shall provide teaching fellowship salary supplements through the period of the fellow's service obligation under subsection (h).

(g) Support for Master Teaching Fellows while enrolled in a master's degree program

A National Science Foundation Master Teacher Fellow may receive a maximum of 1 year of fellowship support while enrolled in a master's degree program as described in subsection (c)(4)(A), except that if such fellow is enrolled in a part-time program, such amount shall be prorated according to the length of the program.

(h) Service obligation

An individual awarded a fellowship under this section shall serve as a mathematics or science teacher in an elementary school or secondary school served by a high need local educational agency for—

(1) in the case of a National Science Foundation Teaching Fellow, 4 years, to be fulfilled

within 6 years of completing the master's program described in subsection (c)(2)(A); and

(2) in the case of a National Science Foundation Master Teaching Fellow, 5 years, to be fulfilled within 7 years of the start of participation in the program under subsection (c)(3).

(i) Matching requirement

(1) In general

An eligible entity receiving a grant under this section shall provide, from non-Federal sources, to carry out the activities supported by the grant—

(A) in the case of grants in an amount of less than $1,500,000, an amount equal to at least 30 percent of the amount of the grant, at least one half of which shall be in cash; and

(B) in the case of grants in an amount of $1,500,000 or more, an amount equal to at least 50 percent of the amount of the grant, at least one half of which shall be in cash.

(2) Waiver

The Director may waive all or part of the matching requirement described in paragraph (1) for any fiscal year for an eligible entity receiving a grant under this section, if the Director determines that applying the matching requirement would result in serious hardship or inability to carry out the authorized activities described in this section.

(j) Conditions of support; collection for noncompliance; failure to complete service obligation; data collection

(1) In general

Except as provided in paragraph (2), subsections (e), (f), (g), and (h) of section 1862n–1 of this title shall apply to eligible entities and recipients of fellowships under this section, as applicable, in the same manner as such subsections apply to eligible entities and recipients of scholarships and stipends under section 1862n–1 of this title, as applicable.

(2) Amount of repayment

If a circumstance described in subparagraph (D) or (E) of section 1862n–1(g)(1) of this title occurs after the completion of 1 year of a service obligation under this section—

(A) for a National Science Foundation Teaching Fellow, the total amount of fellowship award received by the individual under this section while enrolled in the master's degree program, reduced by one-fourth of the total amount for each year of service completed, plus one-half of the total teaching fellowship salary supplements received by such individual under this section, shall be repaid or such amount shall be treated as a loan to be repaid in accordance with section 1862n–1(g)(1)(C) of this title; and

(B) for a National Science Foundation Master Teaching Fellow, the total amount of teaching fellowship salary supplements received by the individual under this section, reduced by one-half, shall be repaid or such amount shall be treated as a loan to be repaid in accordance with section 1862n–1(g)(1)(C) of this title.

(k) STEM teacher service and retention

(1) In general

The Director shall develop and implement practices for increasing the proportion of individuals receiving fellowships under this section who—

(A) fulfill the service obligation required under subsection (h); and

(B) remain in the teaching profession in a high need local educational agency beyond the service obligation.

(2) Practices

The practices described under paragraph (1) may include—

(A) partnering with nonprofit or professional associations or with other government entities to provide individuals receiving fellowships under this section with opportunities for professional development, including mentorship programs that pair those individuals with currently employed and recently retired science, technology, engineering, mathematics, or computer science professionals;

(B) increasing recruitment from high need districts;

(C) establishing a system to better collect, track, and respond to data on the career decisions of individuals receiving fellowships under this section;

(D) conducting research to better understand factors relevant to teacher service and retention, including factors specifically impacting the retention of teachers who are individuals identified in sections 1885a and 1885b of this title; and

(E) conducting pilot programs to improve teacher service and retention.

(Pub. L. 107–368, §10A, as added Pub. L. 110–69, title VII, §7030, Aug. 9, 2007, 121 Stat. 705; amended Pub. L. 111–358, title V, §511, Jan. 4, 2011, 124 Stat. 4010; Pub. L. 114–59, §4(a), Oct. 7, 2015, 129 Stat. 540; Pub. L. 114–329, title III, §301, Jan. 6, 2017, 130 Stat. 3003; Pub. L. 115–303, §2(a)(2), Dec. 11, 2018, 132 Stat. 4399.)

CODIFICATION

Section 7030 of Pub. L. 110–69, which directed that ''Section 10 of the National Science Foundation Authorization Act of 2002 (42 U.S.C. 1862n–1) is amended to read as follows:'' and then set out the text of sections 10 and 10A, was executed by generally amending section 10 and adding a new section 10A (42 U.S.C. 1862n–1a) after section 10, to reflect the probable intent of Congress.

Section was enacted as part of the National Science Foundation Authorization Act of 2002, and not as part of the National Science Foundation Act of 1950 which comprises this chapter.

AMENDMENTS

2018—Subsec. (c)(4)(C). Pub. L. 115–303 added subpar. (C).

2017—Subsec. (k). Pub. L. 114–329 added subsec. (k).

2015—Subsec. (a)(2)(B). Pub. L. 114–59, §4(a)(1), inserted ''or bachelor's'' after ''master's''.

Subsec. (c)(3). Pub. L. 114–59, §4(a)(2)(B)(i), inserted ''for teachers with master's degrees in their field'' after ''Teaching Fellowships'' in introductory provisions.

Subsec. (c)(4). Pub. L. 114–59, §4(a)(2)(A), (B)(ii), (C), added par. (4).

Subsecs. (e), (f). Pub. L. 114–59, §4(a)(3), substituted ''subsection (h)'' for ''subsection (g)'' wherever appearing.

Subsecs. (g) to (j). Pub. L. 114–59, § 4(a)(4), (5), added subsec. (g) and redesignated former subsecs. (g) to (i) as (h) to (j), respectively.

2011—Subsec. (a)(2)(A). Pub. L. 111–358, § 511(b), inserted ''including retiring professionals in those fields,'' after ''mathematics professionals,''.

Subsec. (h)(1). Pub. L. 111–358, § 511(a), amended par. (1) generally. Prior to amendment, text read as follows: ''An eligible entity receiving a grant under this section shall provide, from non-Federal sources, an amount equal to 50 percent of the amount of the grant (which may be provided in cash or in-kind) to carry out the activities supported by the grant.''

EFFECTIVE DATE OF 2018 AMENDMENT

Amendment by Pub. L. 115–303 applicable with respect to grants awarded on or after Oct. 1, 2018, see section 2(b) of Pub. L. 115–303, set out as a note under section 1862n–1 of this title.

§ 1862n–2. Establishment of centers for research on mathematics and science learning and education improvement

(a) Establishment

(1) In general

(A) The Director shall award grants to institutions of higher education or eligible nonprofit organizations (or consortia thereof) to establish multidisciplinary Centers for Research on Learning and Education Improvement.

(B) Grants shall be awarded under this paragraph on a competitive, merit-reviewed basis.

(2) Purpose

The purpose of the Centers shall be to conduct and evaluate research in cognitive science, education, and related fields and to develop ways in which the results of such research can be applied in elementary school and secondary school classrooms to improve the teaching of mathematics and science.

(3) Focus

(A) Each Center shall be focused on a different challenge faced by elementary school or secondary school teachers of mathematics and science. In determining the research focus of the Centers, the Director shall consult with the National Academy of Sciences and the Secretary of Education and take into account the extent to which other Federal programs support research on similar questions.

(B) The proposal solicitation issued by the Director shall state the focus of each Center and applicants shall apply for designation as a specific Center.

(C) At least one Center shall focus on developing ways in which the results of research described in paragraph (2) can be applied, duplicated, and scaled up for use in low-performing elementary schools and secondary schools to improve the teaching and student achievement levels in mathematics and science.

(D) To the extent practicable and relevant to its focus, every Center shall include, as part of its research, work designed to quantitatively assess and improve the ways that information technology is used in the teaching of mathematics and science.

(b) Selection process

(1) Application

An institution of higher education or an eligible nonprofit organization (or a consortium thereof) seeking funding under this section shall submit an application to the Director at such time, in such manner, and containing such information as the Director may require. The application shall include, at a minimum, a description of—

(A) the initial research projects that will be undertaken by the Center and the process by which new projects will be identified;

(B) how the Center will work with other research institutions and schools to broaden the national research agenda on learning and teaching;

(C) how the Center will promote active collaboration among physical, biological, and social science researchers;

(D) how the Center will promote active participation by elementary and secondary mathematics and science teachers and administrators; and

(E) how the results of the Center's research can be incorporated into educational practices, and how the Center will assess the success of those practices.

(2) Review of applications

In evaluating the applications submitted under paragraph (1), the Director shall consider, at a minimum—

(A) the ability of the applicant to effectively carry out the research program, including the activities described in paragraph (1)(E);

(B) the experience of the applicant in conducting research on the science of teaching and learning and the capacity of the applicant to foster new multidisciplinary collaborations;

(C) the capacity of the applicant to attract elementary school and secondary school teachers from a diverse array of schools, and with diverse professional experiences, for participation in Center activities; and

(D) the capacity of the applicant to attract and provide adequate support for graduate students to pursue research at the intersection of educational practice and basic research on human cognition and learning.

(3) Awards

The Director shall ensure, to the extent practicable, that the Centers funded under this section conduct research and develop educational practices designed to improve the educational performance of a broad range of students, including individuals identified in section 1885a or 1885b of this title.

(c) Annual conference

The Director shall convene an annual meeting of the Centers to foster collaboration among the Centers and to further disseminate the results of the Centers' activities.

(d) Coordination

The Director shall coordinate with the Secretary of Education in—

(1) disseminating the results of the research conducted pursuant to grants awarded under this section to elementary school teachers and secondary school teachers; and

(2) providing programming, guidance, and support to ensure that such teachers—