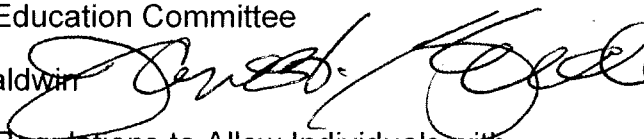
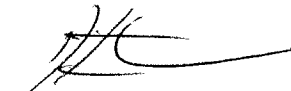
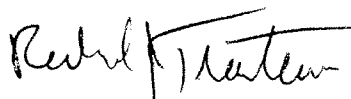




TO: The Higher Education Committee
FROM: James N. Baldwin 
SUBJECT: Adoption of Regulations to Allow Individuals with Advanced Degrees in Science, Technology, Engineering and Mathematics (STEM) and Related Teaching Experience at the Postsecondary Level to Obtain a Teaching Certificate in Earth Science, Biology, Chemistry, Physics, Mathematics or in a Closely Related Field

DATE: May 5, 2011

AUTHORIZATION(S):



SUMMARY

Issue for Decision

Should the Board of Regents adopt as an emergency measure the proposed amendment to allow individuals with advanced degrees in Science, Technology, Engineering and Mathematics (STEM) and related teaching experience at the postsecondary level to obtain a teaching certificate in Earth Science, Biology, Chemistry, Physics, Mathematics or in a Closely Related Field?

Reason(s) for Consideration

Review of policy.

Proposed Handling

The proposed amendment is submitted to the Higher Education Committee for adoption as an emergency measure at its May 2011 meeting.

Procedural History

At its February 2011 meeting, the Board of Regents adopted the proposed amendment as an emergency measure, effective February 15, 2011. A Notice of Proposed Rule Making was published in the State Register on March 2, 2011.

Background Information

Supply and demand data has shown that in many regions of New York there is a shortage of certified teachers in the areas of science and mathematics. More particularly high needs schools often have difficulty filling science and mathematics positions. In our RTTT application we committed to develop an expedited pathway for teachers with an advanced degree and college level teaching experience in the STEM disciplines. With this primary purpose in mind the proposed regulations have been developed to create an expedited pathway for individuals with advanced degrees in STEM and related teaching experience at the postsecondary level to become certified high school teachers in mathematics or one of the sciences or a closely related field. This initiative may also be supportive of the Department's Early College High School program, since high school teachers who are already qualified college faculty could easily be approved to teach courses for college credit.

At its February 2011 meeting, the Board of Regents adopted the proposed amendment which provides eligible candidates with advanced degrees in the STEM areas and teaching experience at the postsecondary level with two certification options:

1. The candidate could obtain a Transitional G certificate to teach math or one of the sciences at the secondary level for two years without completing additional course work in pedagogy. The district would commit to providing mentoring and appropriate professional development in the areas of pedagogy appropriate for the college faculty member based on his/her individualized background and skills during the period that the teacher is employed on a Transitional G certificate. After two years of successful teaching experience with the district on a Transitional G certificate the teacher would be eligible for the initial certificate in that subject area.

OR

2. Individuals who meet the other requirements but do not have an offer of employment by a school district would have the option of completing six credits of undergraduate pedagogical core study or four credits of graduate pedagogical study and become eligible for the full initial certificate.

Below is a summary of the major requirements for the Initial certificate and Transitional G certificate through this expedited STEM pathway.

Requirements for the Initial Certificate:

1. Graduate Degree in one of the STEM fields; and
2. Graduate Major in the subject, or closely related subject area, of the certificate sought; and
3. At least two years of satisfactory teaching experience at the postsecondary level in the certificate area to be taught or in a closely related subject area; and
4. Successful completion of the Liberal Arts and Sciences Test, and

5. Either “a” or “b” below:
 - a) at least six credits of undergraduate pedagogical core study or four credits of graduate pedagogical study for the initial certificate in the area of the candidate’s certificate. The pedagogical core study shall include study in the methods of teaching in the certificate area; teaching students with disabilities; curriculum and lesson planning aligned with the New York State Learning Standards; along with classroom management and teaching at the developmental level of students to be taught.
 - b) two years of satisfactory secondary teaching experience in the subject area on a Transitional G certificate.

Requirements for the Transitional G Certificate:

1. Graduate Degree in one of the STEM fields; and
2. Graduate Major in the subject, or closely related subject area, of the certificate sought; and
3. At least two years of satisfactory teaching experience at the postsecondary level in the certificate area to be taught or in a closely related subject area; and
4. Successful completion of the Liberal Arts and Sciences Test; and
5. Commitment for employment from a school district or BOCES that will provide Mentoring and 70 hours of Professional Development over a two year period, targeted toward appropriate pedagogical skills.

Following publication of the proposed amendment in the State Register on March 2, 2011, the Department received two comments. An assessment of public comment is attached. In response to these comments, the proposed amendment has been amended in three ways:

1. To address the commenter’s concerns about teachers using this expedited pathway to immediately teach in the middle school grades, the proposed amendment has been revised to apply only to Grades 7-12 level certificates.

2. The deadline for individual evaluation for candidates pursuing this expedited pathway has been extended beyond February 1, 2012.

3. The Department has also added language to the regulation to require the school district that will employ the candidate seeking a Transitional G certificate, to create and maintain a plan for mentoring and instructional support. This is in addition to the required 70 or more hours of professional development targeted toward pedagogical skills based upon the needs of the certificate holder.

A Notice of Revised Rule Making will be published in the State Register on June 1, 2011.

Recommendation

VOTED: That paragraphs (45) through (47) of subdivision (b) of Section 80-1.1 be renumbered to paragraphs (46) through (48) and a new paragraph (45) be added; that subparagraph (i) of paragraph (2) of subdivision (a) of section 80-3.3 be amended; that section 80-3.7 be amended and a new section 80-5.22 is added to the Regulations of the Commissioner of Education, effective May 17, 2011, as an emergency action upon a finding by the Board of Regents that such action is necessary to protect the general welfare of the public to address the demonstrated shortage of certified teachers in science and mathematics in grades 7-12.

Timetable for Implementation

If adopted as an emergency measure at the May Regents meeting, the proposed amendment will become effective on May 17, 2011. A third emergency adoption will be necessary at the June 2011 Regents meeting to ensure that the regulations remain continuously in effect until the regulation becomes effective as a permanent rule on August 10, 2011.

STATEMENT OF FACTS AND CIRCUMSTANCES
WHICH NECESSITATE EMERGENCY ACTION

Supply and demand data has shown that in many regions of New York there is a shortage of certified teachers in the areas of science and mathematics. To address this issue, the proposed regulations have been developed to create an expedited pathway for individuals with advanced degrees in STEM and related teaching experience at the postsecondary level to become certified teachers in mathematics or one of the sciences or a closely related field.

At its February 2011 meeting, the Board of Regents adopted the proposed amendment which provides eligible candidates with advanced degrees in the STEM areas and teaching experience at the postsecondary level with two certification options. The candidate could obtain a Transitional G certificate to teach math or one of the sciences at the secondary level without completing additional pedagogical study for two years. The district would commit to providing mentoring and appropriate professional development in the areas of pedagogy during the period that the teacher is employed on a Transitional G certificate. After two years of successful teaching experience with the district on a Transitional G certificate the teacher would be eligible for the initial certificate in that subject area.

The other option is for individuals who meet the other requirements but do not have an offer of employment by a school district they would still have the option of completing six credits of undergraduate pedagogical core study or four credits of graduate pedagogical study.

Following publication of the proposed amendment in the State Register on March 2, 2011, the Department received two comments. An assessment of public comment is attached. In response to these comments, the proposed amendment has been amended in three ways:

1. To address the commenter's concerns about teachers using this expedited pathway to immediately teach in the middle school grades, the proposed amendment has been revised to apply only to Grades 7-12 level certificates.

2. The deadline for individual evaluation has been extended beyond February 1, 2012 for candidates pursuing this expedited pathway.

3. The Department has also added language to the regulation to require the school district that will employ the candidate seeking a Transitional G certificate, to create and maintain a plan for mentoring and instructional support. This is in addition to the required 70 or more hours of professional development targeted toward pedagogical skills.

A Notice of Revised Rule Making will be published in the State Register on June 1, 2011. It is anticipated that the proposed amendment will be presented to the Board of Regents for adoption as a permanent rule at its July 2011 meeting, which is the first scheduled meeting after the expiration of the 30-day public comment period mandated by the State Administrative Procedures Act for revised rule makings. Emergency action is needed to ensure that the revised rule remains continuously in effect until it can be adopted as a permanent rule on August 10, 2011.

AMENDMENT TO THE REGULATIONS OF THE COMMISSIONER OF EDUCATION

Sections 207, 305, 3001, 3004 and 3006 of the Education Law.

1. Paragraphs (45) through (47) of subdivision (b) of Section 80-1.1 of the Regulations of the Commissioner of Education should be renumbered (46) through (48) of Section 80-1.1 of the Regulations of the Commissioner of Education, effective May 17, 2011.

2. A new paragraph (45) of subdivision (b) is added to Section 80-1.1 of the Regulations of the Commissioner of Education, effective May 17, 2011, to read as follows:

(45) Transitional G certificate means the first teaching certificate obtained by a candidate who holds an appropriate graduate degree in science, technology, engineering or mathematics and has two years of acceptable experience teaching in a post-secondary institution, that qualifies that individual to teach in the public schools of New York State, subject to the requirements and limitations of this Part, and excluding the provisional certificate, initial certificate, internship certificate, conditional initial certificate, transitional A certificate, transitional B certificate and transitional C certificate.

3. Subparagraph (i) of paragraph (2) of subdivision (b) of section 80-3.3 of the Regulations of the Commissioner of Education is amended, effective May 17, 2011, to read as follows:

(i) [The] (a) Except as otherwise provided in subdivision (b) of this section, the candidate shall submit evidence of having achieved a satisfactory level of performance on the New York State Teacher Certification Examination liberal arts and sciences test, written assessment of teaching skills, and content specialty test(s) in the area of the

certificate, except that a candidate seeking an initial certificate in the title of Speech and Language Disabilities (all grades) shall not be required to achieve a satisfactory level of performance on the content specialty test.

(b) Examination requirement for candidates with a graduate degree in science, technology, engineering or mathematics and two years of post-secondary teaching experience in the area of the certificate sought. Any candidate seeking an initial certificate in earth science, biology, chemistry, physics, mathematics or in a closely related field as determined by the Department in (grades 7-12) and who is seeking an initial certificate through individual evaluation under section 80-3.7(a)(3)(ii)(c) shall not be required to achieve a satisfactory level of performance on the written assessment of teaching skills examination or the content specialty test.

4. Section 80-3.7 of the Regulations of the Commissioner of Education is amended, effective May 17, 2011, to read as follows:

This section prescribes requirements for meeting the education requirements for classroom teaching certificates through individual evaluation. [This] Except as otherwise provided in this section, this option for meeting education requirements shall only be available for candidates who apply for a certificate in childhood education by February 1, 2007 and for candidates who apply for any other certificate in the classroom teaching service by February 1, 2012, and who upon application qualify for such certificate. Candidates with a graduate degree in science, technology, engineering or mathematics who apply for an initial teaching certificate under 80-3.7 (a)(3)(ii)(3) may continue to meet the education requirements for classroom teaching certificates through individual evaluation after February 1, 2012. The candidate must have achieved a 2.5

cumulative grade point average or its equivalent in the program or programs leading to any degree used to meet the requirements for a certificate under this section. In addition, a candidate must have achieved at least a C or its equivalent in any undergraduate level course and at least a B- or its equivalent in any graduate level course in order for the semester hours associated with that course to be credited toward meeting the content core or pedagogical core semester hour requirements for a certificate under this section. All other requirements for the certificate, including but not limited to, examination and/or experience requirements, as prescribed in this Part, must also be met.

(a) Satisfaction of education requirements through individual evaluation for initial certificates in all titles in classroom teaching service, except in specific career and technical subjects within the field of agriculture, business and marketing and consumer services, health, a technical area, or a trade (grades 7 through 12).

(1) . . .

(2) . . .

(i) . . .

(ii) . . .

(iii) . . .

(iv) . . .

(v) . . .

(3) Additional requirements. A candidate seeking to fulfill the education requirement for the initial certificate through individual evaluation of education

requirements shall meet the additional requirements in this paragraph or their substantial equivalent as determined by the commissioner, if so prescribed for that certificate title, in addition to the general requirements prescribed in paragraph (2) of this subdivision.

(i)

(ii) Specialist in middle childhood education (5-9) and adolescence education (7-12).

(a) . . .

(b) . . .

(c) For candidates with a graduate degree in science, technology, engineering or mathematics and two years of postsecondary teaching experience in the certificate area to be taught or in a closely related subject area acceptable to the Department, who apply for a certificate or license in (grades 7-12) on or after February 2, 2011 in earth science, biology, chemistry, physics, mathematics or a closely related field, the candidate shall not be required to meet the general requirements in paragraph (2) (iii), (iv) or (v) of subdivision (a) of this section. However, the candidate shall meet the following requirements:

(1) Degree completion. The candidate shall possess a graduate degree in science, technology, engineering or mathematics from a regionally or nationally accredited institution of higher education, a higher education institution that the Commissioner deems substantially equivalent, or from an institution authorized by the Board of Regents to confer degrees and whose programs are registered by the

Department. The candidate shall have completed a graduate major in the subject of the certificate sought, or in a related field approved by the department for this purpose.

(2) Post-secondary teaching experience. The candidate must show evidence of at least two years of satisfactory teaching experience at the post-secondary level in the certificate area to be taught or in a closely related subject area acceptable to the Department.

(3) Pedagogical study or two years of satisfactory teaching experience in a school district under a Transitional G certificate. The candidate shall complete one of the following:

(i) at least six credits of undergraduate pedagogical core study or four credits of graduate pedagogical study for the initial certificate in the area of the candidate's certificate, as prescribed for the certificate title in this paragraph, which shall include study in the methods of teaching in the certificate area, teaching students with disabilities; curriculum and lesson planning aligned with the New York State Learning Standards; and classroom management and teaching at the developmental level of students to be taught; or

(ii) at least two years of satisfactory teaching experience in a school district while the candidate holds a Transitional G certificate under this Part.

(iii) . . .

(iv) . . .

(v) . . .

(vi) . . .

(vii) . . .

(viii) . . .

(ix) . . .

(x) . . .

(xi) . . .

(xii) . .

(b) . . .

(c) . . .

5. Section 80-5.22 of the Regulations of the Commissioner is added, effective May 17, 2011 as follows:

§80-5.22 Transitional G certificate for career changers and others holding a graduate or higher degree in science, technology, engineering or mathematics and with at least two years of acceptable post-secondary teaching experience.

(a) General requirements.

(1) Time validity. The transitional G certificate shall be valid for two years.

(2) Limitations. The transitional G certificate shall authorize a candidate to teach only in a school district for which a commitment for employment has been made. The candidate shall meet the requirements in each of the following paragraphs:

(i) Education. A candidate shall hold a graduate degree in science, technology, engineering or mathematics from a regionally or nationally accredited institution of higher education, a higher education institution that the Commissioner deems substantially equivalent, or from an institution authorized by the Board of Regents to confer degrees. A candidate shall complete study in the means for identifying and reporting suspected child abuse and maltreatment, which shall include at least two clock

hours of coursework or training in the identification and reporting of suspected child abuse or maltreatment in accordance with the requirements of section 3004 of the Education Law. In addition, the candidate shall complete at least two clock hours of coursework or training in school violence prevention and intervention, as required by section 3004 of the Education Law, which is provided by a provider approved or deemed approved by the Department pursuant to Subpart 57-2 of this Title.

(ii) Examination. The candidate shall submit evidence of having achieved a satisfactory level of performance on the New York State Teacher Certification Examination liberal arts and sciences test.

(iii) Post-secondary teaching experience. The candidate shall submit evidence of at least two years of satisfactory teaching experience at the post-secondary level in the certificate area to be taught or in a closely related subject area acceptable to the Department.

(iv) Employment and support commitment. The candidate shall submit satisfactory evidence of having a commitment from a school district of at least two years of employment as a teacher with the school district in the area of the certificate sought, which shall include a plan from the school district for mentoring, appropriate instructional support as determined by school leadership and at least 70 hours of professional development targeted toward appropriate pedagogical skills, over the two years of employment.

ASSESSMENT OF PUBLIC COMMENT

Since publication of a Notice of Proposed Rule Making in the State Register on March 2, 2011, the State Education Department received the following comments:

1. COMMENT: Two comments expressed concern that the Transitional G Certificate would not require any college or university teacher preparation.

One comment noted that under this option, it is conceivable that a person with a master's degree in mathematics, two years of teaching young adults in a college setting, no awareness of NYS Learning Standards, IEP or 504 plans, and strategies for English language learners could be the Teacher of Record for sixth graders. This may be a candidate who has never had an opportunity to explore classroom management, how to vary instructional approaches for student characteristics, or middle school/high school assessment approaches.

Another comment suggested that shifting this responsibility to in-service or BOCES will have a detrimental effect of taking those in higher education who study pedagogy out of the process. It will also mean that new teachers will not have the ability to meet other teachers from different districts to discuss what works.

DEPARTMENT RESPONSE: Originally the draft regulation was proposed at the Regents December 2010 meeting with a requirement of two years of post secondary teaching experience, a graduate degree in a STEM area, and six semester hours of coursework in pedagogy for Initial certification.

The Higher Education Committee of the Board of Regents discussed this proposal at its December 2010 meeting and expressed their concern that requiring an additional six college credits in pedagogy for all STEM pathway candidates would

present a disincentive to college faculty to pursue this career change. Members of the Committee also noted that college faculty with a master's degree in science, technology, engineering or math and two years of teaching experience at the post secondary level teaching this subject would possess the skills needed to begin to teach at the high school level.

Based on the Board's December discussion, the Department proposed an alternative to the six semester hours of college course work that allows a college faculty member to obtain a Transitional G certificate under the condition that the employing school district provide mentoring and at least 70 hours of professional development targeted toward appropriate pedagogical skills to the candidate during the course of their employment with the district. Accordingly, the proposed amendment allows a candidate to choose one of the following expedited pathways: (1) commence teaching with a Transitional G certificate with these supports from the school district, or (2) the candidate may complete the six semester hours of college course work in pedagogy to qualify for the initial certificate.

To address the commenter's concerns about teachers using this expedited pathway to immediately teach in the middle school grades, the proposed amendment has been revised to apply only to Grades 7-12 level certificates.

The Department has also added language to the regulation to require the employing school district, for a teacher holding a Transitional G certificate, to have a plan for mentoring and instructional support during the teacher's service on the transitional certificate. This is in addition to the required 70 or more hours of professional development targeted toward appropriate pedagogical skills.

2. COMMENT: One comment indicated that it is not reasonable to expect that in-service staff development will actually be targeted toward the individual. In-district (or BOCES) professional development is designed for individuals who have already been prepared through an accredited college or university teacher preparation program. At the very minimum, the pedagogical core needs to be developed and delivered through an accredited college or university teacher preparation program.

DEPARTMENT RESPONSE: Individual college faculty coming through the STEM pathway will bring different levels of teaching experience and skill. Some may have many years of teaching experience and others may only have the required two years.

The language added to the current proposed regulation requires the local school leadership to assess the supports needed by the teacher and to provide appropriate instructional support including targeted professional development activities.

The implementation of the new teacher performance evaluation system will also support this approach in the future by requiring performance evaluations of all teachers using the Regents approved teaching standards as a common base. School leaders will be required to address areas where a teacher's improvement is needed as a part of that process.

While realizing that resources for all districts and BOCES are tight, the Network Teams that are formed in the BOCES and some districts will be working with all districts to provide quality professional development activities for teachers. These efforts will substantially add to the resources devoted to professional development system wide.

3. COMMENT: One comment indicated that “similar to requirements for clinically rich teacher preparation pilot programs, prior to assigning individuals to a classroom, schools employing that individual under the Transitional G Certificate should specify the mentoring plan. Candidates should be assigned a teacher-mentor and a support team including the school principal or designee and a school curriculum supervisor or specialist. Schools should document that the plan was implemented as a requirement for the individual to obtain the Initial Certificate.”

DEPARTMENT RESPONSE: The Department has revised the regulation in response to this comment to require the school district that is employing the Transitional G candidate to create and maintain a plan for mentoring, appropriate instructional support and at least 70 hours of professional development targeted toward appropriate pedagogical skills, over the two years of employment.