

**U.S. Department of Education - EDCAPS
G5-Technical Review Form (New)**

Technical Review Form

Panel #4 - 84.411B Panel - 4: 84.411B

Reader #4: *****

Applicant: National Math and Science Initiative (U411B110004)

Questions

Summary Statement - Summary Statement

1. Summary Statement (Optional)

General:

Reader's Score:

Selection Criteria - Need for Project

1. The Secretary considers the need for the project. In determining the need for the project, the Secretary considers the following factors:

(1) The magnitude of the need for the services to be provided or the activities to be carried out by the proposed project.

(2) The extent to which the proposed project represents an exceptional approach to the priority or priorities established for the competition.

(3) The importance and magnitude of the effect expected to be obtained by the proposed project, including the extent to which the project will substantially and measurably improve student achievement or student growth, close achievement gaps, decrease dropout rates, increase high school graduation rates, or increase college enrollment and completion rates. The evidence in support of the importance and magnitude of the effect would be the research-based evidence provided by the eligible applicant to support the proposed project.

Note Linking Magnitude of Effect to Presented Evidence: The Secretary notes that the extent to which the proposed project is consistent with the research evidence provided by the eligible applicant to support the proposed project is relevant to addressing the third factor of Selection Criterion A and, therefore, will be considered by the Secretary in evaluating the importance and/or magnitude of the impact expected to be obtained by the proposed project.

Strengths:

N/A

Weaknesses:

N/A

Reader's Score: 0

Selection Criteria - Quality of Project Design

1. The Secretary considers the quality of the design of the proposed project. In determining the quality of the project design, the Secretary considers the following factors:

(1) The extent to which the proposed project has a clear set of goals and an explicit strategy, with actions that are
(a) Aligned with the priorities the eligible applicant is seeking to meet, and
(b) expected to result in achieving the goals, objectives, and outcomes of the proposed project.

(2) The extent to which the costs are reasonable in relation to the objectives, design, and potential significance of the proposed project.

(3) The extent to which the services to be provided by the proposed project reflect up-to-date knowledge from research and effective practice.

(4) The eligible applicant's estimate of the cost of the proposed project, which includes the start up and operating costs per student per year (including indirect costs) for reaching the total number of students proposed to be served by the project. The eligible applicant must include an estimate of the costs for the eligible applicant or others (including other partners) to reach 100,000, 250,000, and 500,000 students.

Note: The Secretary considers cost estimates both

(a) To assess the reasonableness of the costs relative to the objectives, design, and potential significance for the total number of students to be served by the proposed project, which is determined by the eligible applicant, and
(b) To understand the possible costs for the eligible applicant or others (including other partners) to reach the scaling targets of 100,000, 250,000, and 500,000 students for Validation grants. An eligible applicant is free to propose how many students it will serve under its project, and is expected to reach that number of students by the end of the grant period. The scaling targets, in contrast, are theoretical and allow peer reviewers to assess the cost-effectiveness generally of proposed projects, particularly in cases where initial investment may be required to support projects that operate at reduced cost in the future, whether implemented by the eligible applicant or any other entity. Grantees are not required to reach these numbers during the grant period.

(5) The potential and planning for the incorporation of project purposes, activities, or benefits into the ongoing work of the eligible applicant and any other partners at the end of the Validation grant.

Strengths:

N/A

Weaknesses:

N/A

Reader's Score: 0

Selection Criteria - Quality of the Project Evaluation

1. The Secretary considers the quality of the project evaluation. In determining the quality of the project evaluation to be conducted, the Secretary considers the following factors:

(1) The extent to which the methods of evaluation will include a well designed experimental study or a well designed quasi-experimental study.

(2) The extent to which the methods of evaluation will provide high-quality implementation data and performance feedback, and permit periodic assessment of progress toward achieving intended outcomes.

(3) The extent to which the evaluation will provide sufficient information about the key elements and approach of the project so as to facilitate replication or testing in other settings.

(4) The extent to which the proposed project plan includes sufficient resources to carry out the project evaluation effectively.

Note: We encourage eligible applicants to review the following technical assistance resources on evaluation: (1) What Works Clearinghouse Procedures and Standards Handbook and (2) IES/NCEE Technical Methods papers.

Strengths:

Strengths

A comparative interrupted time series will be used to compare outcomes of high schools implementing the project to other comparable high schools which is appropriate for making comparisons (pg. 24). A well-designed quasi-experimental design will be employed to compare outcomes of schools (pg. 24). Matching will occur using three years of prior data is sufficient for reliability (pg. 26). Multiple sources will be used to collect data such as surveys interviews, and focus groups which is necessary to learn the ways in which the program was actually implemented in schools (pg. 27). Throughout the first six months of the project an auditing plan will be implementing to provide high-quality implementation data which will lead to close monitoring of the program and identify any problems early on (pg. 28). A sufficient amount of information will be collected throughout the project to facilitate the replication or testing in other settings (pg. 28-29). The plethora of information sources and data collected should yield fruitful information on the project. The fiscal components of the evaluation are appropriate to carry out the evaluation plan (budget) and American Institute for Research (AIR) is well qualified to carry out this evaluation.

Weaknesses:

Weaknesses

More specific information on the ways in which districts with a comparison school but not a project school will be recruited is needed (pg. 25). Providing details on the comparison schools or the plan for recruiting the comparison schools is an important part of the evaluation design (pg. 25).

Reader's Score: 21

Selection Criteria - Quality of the Management Plan

1. The Secretary considers the quality of the management plan and personnel for the proposed project. In determining the quality of the management plan and personnel for the proposed project, the Secretary considers the following factors:

(1) The adequacy of the management plan to achieve the objectives of the proposed project on time and within budget, including clearly defined responsibilities, timelines, and milestones for accomplishing project tasks, as well as tasks related to the sustainability and scalability of the proposed project.

(2) The qualifications, including relevant training and experience, of the project director and key project personnel, especially in managing complex projects.

(3) The eligible applicant's capacity (e.g., in terms of qualified personnel, financial resources, or management capacity) to bring the proposed project to scale on a State or regional level (as appropriate, based on the results of the proposed project) working directly, or through other partners, either during or following the end of the grant period.

Strengths:

N/A

Weaknesses:

N/A

Reader's Score: 0

Priority Questions

Competitive Preference Priority - Competitive Preference Priority 6

1. Innovations for Improving Early Learning Outcomes (zero or one point)

We give competitive preference to applications for projects that would implement innovative practices, strategies, or programs that are designed to improve educational outcomes for high-need students who are young children (birth through 3rd grade) by enhancing the quality of early learning programs. To meet this priority, applications must focus on

(a) improving young children's school readiness (including social, emotional, and cognitive readiness) so that children are prepared for success in core academic subjects (as defined in section 9101(11) of the ESEA);

(b) improving developmental milestones and standards and aligning them with appropriate outcome measures; and

(c) improving alignment, collaboration, and transitions between early learning programs that serve children from birth to age three, in preschools, and in kindergarten through third grade.

Strengths:

Weaknesses:

Reader's Score:

Competitive Preference Priority - Competitive Preference Priority 7

1. Competitive Preference Priority 7 - Innovations that Support College Access and Success (zero or one point)

We give competitive preference to applications for projects that would implement innovative practices, strategies, or programs that are designed to enable kindergarten through grade 12 (K-12) students, particularly high school students, to successfully prepare for, enter, and graduate from a two- or four-year college. To meet this priority, applications must include practices, strategies, or programs for K-12 students that

(a) address students preparedness and expectations related to college;

(b) help students understand issues of college affordability and the financial aid and college application processes; and

(c) provide support to students' from peers and knowledgeable adults.

Strengths:

Weaknesses:

Reader's Score:

Competitive Preference Priority - Competitive Preference Priority 8

1. Competitive Preference Priority 8 - Innovations to Address the Unique Learning Needs of Students with Disabilities and Limited English Proficient Students (zero or one point)

We give competitive preference to applications for projects that would implement innovative practices, strategies, or programs that are designed to address the unique learning needs of students with disabilities, including those who are assessed based on alternate academic achievement standards, or the linguistic and academic needs of limited English proficient students. To meet this priority, applications must provide for the implementation of particular practices, strategies, or programs that are designed to improve academic outcomes, close achievement gaps, and increase college- and career-readiness, including increasing high school graduation rates (as defined in this notice), for students with disabilities or limited English proficient students.

Strengths:

Weaknesses:

Reader's Score:

Competitive Preference Priority - Competitive Preference Priority 9

1. Competitive Preference Priority 9 - Improving Productivity (zero or one point)

We give competitive preference to applications for projects that are designed to significantly increase efficiency in the use of time, staff, money, or other resources while improving student learning or other educational outcomes (i.e., outcome per unit of resource). Such projects may include innovative and sustainable uses of technology, modification of school schedules and teacher compensation systems, use of open educational resources (as defined in this notice), or other strategies.

Strengths:

Weaknesses:

Reader's Score:

Competitive Preference Priority - Competitive Preference Priority 10

1. Competitive Preference Priority 10 - Technology (zero or one point)

We give competitive preference to applications for projects that are designed to improve student achievement or teacher effectiveness through the use of high-quality digital tools or materials, which may include preparing teachers to use the technology to improve instruction, as well as developing, implementing, or evaluating digital tools or materials.

Strengths:

Weaknesses:

Reader's Score:

Status: Submitted

Last Updated: 9/12/11 12:00 AM

Technical Review Form

Panel #4 - 84.411B Panel - 4: 84.411B

Reader #1: *****

Applicant: National Math and Science Initiative (U411B110004)

Questions

Summary Statement - Summary Statement

1. Summary Statement (Optional)

General:

Reader's Score:

Selection Criteria - Need for Project

1. The Secretary considers the need for the project. In determining the need for the project, the Secretary considers the following factors:

(1) The magnitude of the need for the services to be provided or the activities to be carried out by the proposed project.

(2) The extent to which the proposed project represents an exceptional approach to the priority or priorities established for the competition.

(3) The importance and magnitude of the effect expected to be obtained by the proposed project, including the extent to which the project will substantially and measurably improve student achievement or student growth, close achievement gaps, decrease dropout rates, increase high school graduation rates, or increase college enrollment and completion rates. The evidence in support of the importance and magnitude of the effect would be the research-based evidence provided by the eligible applicant to support the proposed project.

Note Linking Magnitude of Effect to Presented Evidence: The Secretary notes that the extent to which the proposed project is consistent with the research evidence provided by the eligible applicant to support the proposed project is relevant to addressing the third factor of Selection Criterion A and, therefore, will be considered by the Secretary in evaluating the importance and/or magnitude of the impact expected to be obtained by the proposed project.

Strengths:

1. A strength of the proposed application is the demonstrated magnitude of the need of the proposed services as reflected in 28 state non-profits in 2007 requesting to participate and the awarding of six states. A1 pg. 2/3

2. A strength of the proposed application is the magnitude of the need for groups traditionally underrepresented in STEM in Colorado (CO) and Indiana (IN) to have access to rigorous and engaging course work in STEM in comparison to the economic disadvantaged status and percent of CO and In Africa American and Hispanic students passing English, mathematics and science AP courses. A1 pg. 5

3. A strength of the proposed program is the extent to which it has provided access to rigorous STEM course work for groups traditionally underrepresented in STEM from the current 320 schools in 216 districts to a proposed additional 90,900 students in 40 LEAs (Appendix H). The approach has been recognized as being exceptional to include the National Mathematics and Science Initiative identification of APTIP as an effective program in in the Rising Above the Storm: Energizing and Employing America for a Brighter Future; the

success in twenty-six Texas LEAs which has led to APTIP use with 320 schools in 216 school districts; and the extensive letters of support from school, business, congressional and community leaders and the private sector. (Appendix G). A2 pg. 6/7

4. A strength of the proposed application is the direct correlation of the proposed project to research-based evidence reflected in the Jackson study "A Stitch in Time" of increasing college completion rates and Holtzman, 2010 study of improving student achievement based on the positive effects of APTIP on passing AP exams. Pg. 8-11 A3

Weaknesses:

5. A weakness in the proposed application is the lack of clarity from the percentages and/or numbers of the proposed 90,700 students that represent groups traditionally underrepresented in STEM who are proposed to have increased access to rigorous and engaging source work in STEM. A2

Reader's Score: 24

Selection Criteria - Quality of Project Design

1. The Secretary considers the quality of the design of the proposed project. In determining the quality of the project design, the Secretary considers the following factors:

(1) The extent to which the proposed project has a clear set of goals and an explicit strategy, with actions that are
(a) Aligned with the priorities the eligible applicant is seeking to meet, and
(b) expected to result in achieving the goals, objectives, and outcomes of the proposed project.

(2) The extent to which the costs are reasonable in relation to the objectives, design, and potential significance of the proposed project.

(3) The extent to which the services to be provided by the proposed project reflect up-to-date knowledge from research and effective practice.

(4) The eligible applicant's estimate of the cost of the proposed project, which includes the start up and operating costs per student per year (including indirect costs) for reaching the total number of students proposed to be served by the project. The eligible applicant must include an estimate of the costs for the eligible applicant or others (including other partners) to reach 100,000, 250,000, and 500,000 students.

Note: The Secretary considers cost estimates both

(a) To assess the reasonableness of the costs relative to the objectives, design, and potential significance for the total number of students to be served by the proposed project, which is determined by the eligible applicant, and
(b) To understand the possible costs for the eligible applicant or others (including other partners) to reach the scaling targets of 100,000, 250,000, and 500,000 students for Validation grants. An eligible applicant is free to propose how many students it will serve under its project, and is expected to reach that number of students by the end of the grant period. The scaling targets, in contrast, are theoretical and allow peer reviewers to assess the cost-effectiveness generally of proposed projects, particularly in cases where initial investment may be required to support projects that operate at reduced cost in the future, whether implemented by the eligible applicant or any other entity. Grantees are not required to reach these numbers during the grant period.

(5) The potential and planning for the incorporation of project purposes, activities, or benefits into the ongoing work of the eligible applicant and any other partners at the end of the Validation grant.

Strengths:

1. A strength of the proposed application is the alignment of STEM priority of increasing the number of groups that are traditionally underrepresented in STEM to the identified goal to APTIP Logic Model (Appendix J, Exhibit 1) and the corresponding strategies, actions, timelines, tracking indicators, milestones, outcomes, and performance indicators (Appendix J, Exhibit 20). B1 e559 - e612

2. The reasonableness of the cost as compared to the projected goal of impacting 90,700 students for a one

time projected cost of \$182.00 is a strength of the proposed application and is supported by NMSI Taking Successful Programs to Scale and Creating Lasting Results (Appendix J, Exhibit 5). Estimates of cost to reach 100,00, 250,000, and 500, 000 students reflects a decrease in per student costs due to proposed economies of scale. B3 Pg. 21

3. A strength of the proposed application is the balance of the up-to-date research (Jackson, C.K. 2010; Holtzman, Deborah. 2010; Gibson, Neal. 2011) for APTIP, that is proposed to be replicated, and the previously effective APTIP practices that are grounded in the fidelity of the Logic Model and Appendix J Exhibit 2. B3 e32, Pg. 14

4. Examples of sustainability activities built into the proposed application to continue the work at the end of the Validation grant include the decreasing of the grant funding each year and increasing the portion the NSA is to provide; regular communication with state decision makers; and commitment of funds from the private sector before APTIP is proposed to begin. These planned activities and serve as a strength. Pg. 23 B5

Weaknesses:

5. The budget narrative (e712 - e713) is limited in specificity of costs by category by grant year. Since the proposed project has multiple years of being implemented the lack of specificity serves as a weakness in demonstrating that the extent of the cost are reasonable to the objectives, design and potential significance of the proposed project and to serve as a model for other states. B2 e712 - e713

Reader's Score: 24

Selection Criteria - Quality of the Project Evaluation

1. The Secretary considers the quality of the project evaluation. In determining the quality of the project evaluation to be conducted, the Secretary considers the following factors:

(1) The extent to which the methods of evaluation will include a well designed experimental study or a well designed quasi-experimental study.

(2) The extent to which the methods of evaluation will provide high-quality implementation data and performance feedback, and permit periodic assessment of progress toward achieving intended outcomes.

(3) The extent to which the evaluation will provide sufficient information about the key elements and approach of the project so as to facilitate replication or testing in other settings.

(4) The extent to which the proposed project plan includes sufficient resources to carry out the project evaluation effectively.

Note: We encourage eligible applicants to review the following technical assistance resources on evaluation: (1) What Works Clearinghouse Procedures and Standards Handbook and (2) IES/NCEE Technical Methods papers.

Strengths:

n/a

Weaknesses:

n/a

Reader's Score: 0

Selection Criteria - Quality of the Management Plan

1. The Secretary considers the quality of the management plan and personnel for the proposed project. In determining the quality of the management plan and personnel for the proposed project, the Secretary considers the following factors:

(1) The adequacy of the management plan to achieve the objectives of the proposed project on time and within budget, including clearly defined responsibilities, timelines, and milestones for accomplishing project tasks, as well as tasks related to the sustainability and scalability of the proposed project.

(2) The qualifications, including relevant training and experience, of the project director and key project personnel, especially in managing complex projects.

(3) The eligible applicant's capacity (e.g., in terms of qualified personnel, financial resources, or management capacity) to bring the proposed project to scale on a State or regional level (as appropriate, based on the results of the proposed project) working directly, or through other partners, either during or following the end of the grant period.

Strengths:

1. A strength of the proposed application is the level of fidelity the management plan provides toward the identified goal of increasing the number of students scoring 3 or higher on AP exams to increase student achievement. Proposed application examples supporting the strength include the NMSI Electronic Management System to monitor APTIP replication; the correlation of milestone completion to distribution of funds; and the identified tasks in the self-monitoring milestones that are correlated against identified measurable outcomes (Appendix J, Exhibit 2). Pg. e67 and Appendix J. D1

2. The NMSI APTIP replication structure serves as a strength in that the implementation structure provides three years of support through annual cohorts of 20 high schools with tasks for LEA personnel supporting the sustainability of the proposed project. Pg. 20 D1

3. The qualifications of the project director and key personnel for the proposed application serve as a strength. The strength is supported by the eligible applicant staff who have two-fold relevant training; experience in implementing APTIP in 320 schools and having taught Advanced Placement courses either in English, mathematics and science. The project director currently has relevant experience in overseeing \$79 million of APTIP grants in six states in successfully replicating the proposed application with groups traditionally underrepresented in STEM. The Chief Financial Officer has six years of experience in working as a financial officer in the non-profit sector. Pg. 36 e300 D2

4. The eligible applicants capacity to bring the project to scale is comprehensive and serves as a strength. NMSI has detailed it's strategies in seven areas to scale the propose program in its publication "Taking Effective Programs to Scale (Appendix J. Exhibit 5) and already replicated APTIP in 300 schools. APTIP has demonstrated the value in a self-sustaining program after the grant period by scaling the proposed project with their current NSA partners in six states during the grant period. D3 Pg.

Weaknesses:

1. No weaknesses found.

Reader's Score: 25

Priority Questions

Competitive Preference Priority - Competitive Preference Priority 6

1. Innovations for Improving Early Learning Outcomes (zero or one point)

We give competitive preference to applications for projects that would implement innovative practices, strategies, or programs that are designed to improve educational outcomes for high-need students who are young children (birth through 3rd grade) by enhancing the quality of early learning programs. To meet this priority, applications must focus on

(a) improving young children's school readiness (including social, emotional, and cognitive readiness) so that children are prepared for success in core academic subjects (as defined in section 9101(11) of the

ESEA);

(b) improving developmental milestones and standards and aligning them with appropriate outcome measures; and

(c) improving alignment, collaboration, and transitions between early learning programs that serve children from birth to age three, in preschools, and in kindergarten through third grade.

Strengths:

Weaknesses:

Reader's Score:

Competitive Preference Priority - Competitive Preference Priority 7

1. Competitive Preference Priority 7 - Innovations that Support College Access and Success (zero or one point)

We give competitive preference to applications for projects that would implement innovative practices, strategies, or programs that are designed to enable kindergarten through grade 12 (K-12) students, particularly high school students, to successfully prepare for, enter, and graduate from a two- or four-year college. To meet this priority, applications must include practices, strategies, or programs for K-12 students that

(a) address students preparedness and expectations related to college;

(b) help students understand issues of college affordability and the financial aid and college application processes; and

(c) provide support to students' from peers and knowledgeable adults.

Strengths:

1. The proposed application is designed for 90,000 high need students in 180 high schools and feeder schools the two STEM areas of science and mathematics that specifically addresses Advanced Placement and Training and Incentive Program (APTIP) success reflected in studies by Jackson, C.K. and Holtzman, Deborah J. e32.

2. A strength is APTIP's provision of parent nights for helping students to understand the financial aid and college application process and define mechanisms for high school peers and leaders to interface with middle school students to expect participation and success in college. E33

Weaknesses:

1. No weaknesses found.

Reader's Score: 1

Competitive Preference Priority - Competitive Preference Priority 8

1. Competitive Preference Priority 8 - Innovations to Address the Unique Learning Needs of Students with Disabilities and Limited English Proficient Students (zero or one point)

We give competitive preference to applications for projects that would implement innovative practices, strategies, or programs that are designed to address the unique learning needs of students with disabilities, including those who are assessed based on alternate academic achievement standards, or

the linguistic and academic needs of limited English proficient students. To meet this priority, applications must provide for the implementation of particular practices, strategies, or programs that are designed to improve academic outcomes, close achievement gaps, and increase college- and career-readiness, including increasing high school graduation rates (as defined in this notice), for students with disabilities or limited English proficient students.

Strengths:

Weaknesses:

Reader's Score:

Competitive Preference Priority - Competitive Preference Priority 9

1. Competitive Preference Priority 9 - Improving Productivity (zero or one point)

We give competitive preference to applications for projects that are designed to significantly increase efficiency in the use of time, staff, money, or other resources while improving student learning or other educational outcomes (i.e., outcome per unit of resource). Such projects may include innovative and sustainable uses of technology, modification of school schedules and teacher compensation systems, use of open educational resources (as defined in this notice), or other strategies.

Strengths:

1. A strength of the proposed application is the comprehensiveness of the strategies to improve productivity for teachers and students that include modification of school schedules, school policies, a system for rewarding teacher financially, and the strategy for providing tutoring of students that also serves as targeted professional development.

Weaknesses:

Reader's Score: 1

Competitive Preference Priority - Competitive Preference Priority 10

1. Competitive Preference Priority 10 - Technology (zero or one point)

We give competitive preference to applications for projects that are designed to improve student achievement or teacher effectiveness through the use of high-quality digital tools or materials, which may include preparing teachers to use the technology to improve instruction, as well as developing, implementing, or evaluating digital tools or materials.

Strengths:

Weaknesses:

Reader's Score:

Status: Submitted

Last Updated: 9/21/11 12:00 AM

Technical Review Form

Panel #4 - 84.411B Panel - 4: 84.411B

Reader #5: *****

Applicant: National Math and Science Initiative (U411B110004)

Questions

Summary Statement - Summary Statement

1. Summary Statement (Optional)

General:

Reader's Score:

Selection Criteria - Need for Project

1. The Secretary considers the need for the project. In determining the need for the project, the Secretary considers the following factors:

(1) The magnitude of the need for the services to be provided or the activities to be carried out by the proposed project.

(2) The extent to which the proposed project represents an exceptional approach to the priority or priorities established for the competition.

(3) The importance and magnitude of the effect expected to be obtained by the proposed project, including the extent to which the project will substantially and measurably improve student achievement or student growth, close achievement gaps, decrease dropout rates, increase high school graduation rates, or increase college enrollment and completion rates. The evidence in support of the importance and magnitude of the effect would be the research-based evidence provided by the eligible applicant to support the proposed project.

Note Linking Magnitude of Effect to Presented Evidence: The Secretary notes that the extent to which the proposed project is consistent with the research evidence provided by the eligible applicant to support the proposed project is relevant to addressing the third factor of Selection Criterion A and, therefore, will be considered by the Secretary in evaluating the importance and/or magnitude of the impact expected to be obtained by the proposed project.

Strengths:

N/A

Weaknesses:

N/A

Reader's Score: 0

Selection Criteria - Quality of Project Design

1. The Secretary considers the quality of the design of the proposed project. In determining the quality of the project design, the Secretary considers the following factors:

(1) The extent to which the proposed project has a clear set of goals and an explicit strategy, with actions that are
(a) Aligned with the priorities the eligible applicant is seeking to meet, and
(b) expected to result in achieving the goals, objectives, and outcomes of the proposed project.

(2) The extent to which the costs are reasonable in relation to the objectives, design, and potential significance of the proposed project.

(3) The extent to which the services to be provided by the proposed project reflect up-to-date knowledge from research and effective practice.

(4) The eligible applicant's estimate of the cost of the proposed project, which includes the start up and operating costs per student per year (including indirect costs) for reaching the total number of students proposed to be served by the project. The eligible applicant must include an estimate of the costs for the eligible applicant or others (including other partners) to reach 100,000, 250,000, and 500,000 students.

Note: The Secretary considers cost estimates both

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(5) The potential and planning for the incorporation of project purposes, activities, or benefits into the ongoing work of the eligible applicant and any other partners at the end of the Validation grant.

Strengths:

N/A

Weaknesses:

N/A

Reader's Score: 0

Selection Criteria - Quality of the Project Evaluation

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(3) The extent to which the evaluation will provide sufficient information about the key elements and approach of the project so as to facilitate replication or testing in other settings.

(4) The extent to which the proposed project plan includes sufficient resources to carry out the project evaluation effectively.

Note: We encourage eligible applicants to review the following technical assistance resources on evaluation: (1) What Works Clearinghouse Procedures and Standards Handbook and (2) IES/NCEE Technical Methods papers.

Strengths:

The evaluation plan addresses both implementation and impact. The implementation evaluation includes a variety of methods, including surveys (teachers, students, and parents) and site visits with interviews and observations. These multiple methods will give a complete picture of variations in implementation and provide information to program managers so they can make appropriate adjustments in the project activities and supports. The quasi-experimental design for the outcome evaluation is appropriate. Moreover, the proposed evaluation uses a sophisticated approach to matching, which will enhance the credibility of results. The fiscal allocation to the evaluation is adequate for the size and scope of both the project and the evaluation. AIR is well qualified to carry out the evaluation plan.

Weaknesses:

Although the approach to matching is sophisticated, it does not account for issues related to self selection and screening of the schools involved in the project. The demands NMSI places on participating schools are high (appropriately so for the project's goals). Consequently, even schools with similar characteristics on important dimensions are likely to be different in

Reader's Score: 20

Selection Criteria - Quality of the Management Plan

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Strengths:

N/A

Weaknesses:

N/A

Reader's Score: 0

Priority Questions

Competitive Preference Priority - Competitive Preference Priority 6

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strategies, or programs that are designed to improve educational outcomes for high-need students who are young children (birth through 3rd grade) by enhancing the quality of early learning programs. To meet this priority, applications must focus on

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(b) improving developmental milestones and standards and aligning them with appropriate outcome measures; and

(c) improving alignment, collaboration, and transitions between early learning programs that serve children from birth to age three, in preschools, and in kindergarten through third grade.

Strengths:

Weaknesses:

Reader's Score:

Competitive Preference Priority - Competitive Preference Priority 7

1. Competitive Preference Priority 7 - Innovations that Support College Access and Success (zero or one point)

We give competitive preference to applications for projects that would implement innovative practices, strategies, or programs that are designed to enable kindergarten through grade 12 (K-12) students, particularly high school students, to successfully prepare for, enter, and graduate from a two- or four-year college. To meet this priority, applications must include practices, strategies, or programs for K-12 students that

(a) address students preparedness and expectations related to college;

(b) help students understand issues of college affordability and the financial aid and college application processes; and

(c) provide support to students' from peers and knowledgeable adults.

Strengths:

Weaknesses:

Reader's Score:

Competitive Preference Priority - Competitive Preference Priority 8

1. Competitive Preference Priority 8 - Innovations to Address the Unique Learning Needs of Students with Disabilities and Limited English Proficient Students (zero or one point)

We give competitive preference to applications for projects that would implement innovative practices, strategies, or programs that are designed to address the unique learning needs of students with disabilities, including those who are assessed based on alternate academic achievement standards, or the linguistic and academic needs of limited English proficient students. To meet this priority,

applications must provide for the implementation of particular practices, strategies, or programs that are designed to improve academic outcomes, close achievement gaps, and increase college- and career-readiness, including increasing high school graduation rates (as defined in this notice), for students with disabilities or limited English proficient students.

Strengths:

Weaknesses:

Reader's Score:

Competitive Preference Priority - Competitive Preference Priority 9

1. Competitive Preference Priority 9 - Improving Productivity (zero or one point)

We give competitive preference to applications for projects that are designed to significantly increase efficiency in the use of time, staff, money, or other resources while improving student learning or other educational outcomes (i.e., outcome per unit of resource). Such projects may include innovative and sustainable uses of technology, modification of school schedules and teacher compensation systems, use of open educational resources (as defined in this notice), or other strategies.

Strengths:

Weaknesses:

Reader's Score:

Competitive Preference Priority - Competitive Preference Priority 10

1. Competitive Preference Priority 10 - Technology (zero or one point)

We give competitive preference to applications for projects that are designed to improve student achievement or teacher effectiveness through the use of high-quality digital tools or materials, which may include preparing teachers to use the technology to improve instruction, as well as developing, implementing, or evaluating digital tools or materials.

Strengths:

Weaknesses:

Reader's Score:

Status: Submitted
Last Updated: 9/13/11 12:00 AM

Technical Review Form

Panel #4 - 84.411B Panel - 4: 84.411B

Reader #2: *****

Applicant: National Math and Science Initiative (U411B110004)

Questions

Summary Statement - Summary Statement

1. Summary Statement (Optional)

General:

Reader's Score:

Selection Criteria - Need for Project

1. The Secretary considers the need for the project. In determining the need for the project, the Secretary considers the following factors:

(1) The magnitude of the need for the services to be provided or the activities to be carried out by the proposed project.

(2) The extent to which the proposed project represents an exceptional approach to the priority or priorities established for the competition.

(3) The importance and magnitude of the effect expected to be obtained by the proposed project, including the extent to which the project will substantially and measurably improve student achievement or student growth, close achievement gaps, decrease dropout rates, increase high school graduation rates, or increase college enrollment and completion rates. The evidence in support of the importance and magnitude of the effect would be the research-based evidence provided by the eligible applicant to support the proposed project.

Note Linking Magnitude of Effect to Presented Evidence: The Secretary notes that the extent to which the proposed project is consistent with the research evidence provided by the eligible applicant to support the proposed project is relevant to addressing the third factor of Selection Criterion A and, therefore, will be considered by the Secretary in evaluating the importance and/or magnitude of the impact expected to be obtained by the proposed project.

Strengths:

The Advanced Placement Training and Incentive Program is unique in its approach to AP course offerings by establishing an inclusive environment. This is contrary to the traditional model of requiring either a sequence of coursework or specific GPA. Breaking down the barriers opens the pool of students interested in challenging coursework to those not traditionally recruited. (p. e17) Among the schools who have adopted this environment those students passing with a 3, 4, or 5 increased 154% among African-American and Hispanic students in math, science, and English. Passing rigorous and challenging AP course work reassures these students that they are capable.

The proposal is a unique program that encourages any and all students with a sincere interest in a rigorous course, to try any AP offering and it all but guarantees a passing score. P. e36, 37

National Math and Science Initiative (NMSI) is scaling further its already successful program to include 90,900 additional students from 180 high schools in Colorado and Indiana. (p. e38)

Research supports that NMSI's Advanced Placement Training and Incentive Program (APTIP) does increase student achievement and college-readiness, especially for high-need students and traditionally underrepresented groups such as minorities and women (p. e43)

Weaknesses:

none noted

Reader's Score: 25

Selection Criteria - Quality of Project Design

1. The Secretary considers the quality of the design of the proposed project. In determining the quality of the project design, the Secretary considers the following factors:

(1) The extent to which the proposed project has a clear set of goals and an explicit strategy, with actions that are

(a) Aligned with the priorities the eligible applicant is seeking to meet, and

(b) expected to result in achieving the goals, objectives, and outcomes of the proposed project.

(2) The extent to which the costs are reasonable in relation to the objectives, design, and potential significance of the proposed project.

(3) The extent to which the services to be provided by the proposed project reflect up-to-date knowledge from research and effective practice.

(4) The eligible applicant's estimate of the cost of the proposed project, which includes the start up and operating costs per student per year (including indirect costs) for reaching the total number of students proposed to be served by the project. The eligible applicant must include an estimate of the costs for the eligible applicant or others (including other partners) to reach 100,000, 250,000, and 500,000 students.

Note: The Secretary considers cost estimates both

(a) To assess the reasonableness of the costs relative to the objectives, design, and potential significance for the total number of students to be served by the proposed project, which is determined by the eligible applicant, and

(b) To understand the possible costs for the eligible applicant or others (including other partners) to reach the scaling targets of 100,000, 250,000, and 500,000 students for Validation grants. An eligible applicant is free to propose how many students it will serve under its project, and is expected to reach that number of students by the end of the grant period. The scaling targets, in contrast, are theoretical and allow peer reviewers to assess the cost-effectiveness generally of proposed projects, particularly in cases where initial investment may be required to support projects that operate at reduced cost in the future, whether implemented by the eligible applicant or any other entity. Grantees are not required to reach these numbers during the grant period.

(5) The potential and planning for the incorporation of project purposes, activities, or benefits into the ongoing work of the eligible applicant and any other partners at the end of the Validation grant.

Strengths:

The objective of the proposal is clear (p. e25), "to increase the number of students scoring 3 or higher on (passing) AP exams in math, science, and English to increase student achievement and college-readiness in STEM subjects."

National Math and Science Initiative (NMSI) Advanced Placement Training Incentive Program (APTIP) is calling for a systemic reform in AP philosophies in high schools, redefining their basic framework as well as the school environment.(p. e47) which promotes success to the project in meeting goals, objectives and proposed outcomes.

The budget is within reason for a project of this magnitude. The project is grounded in up-to-date knowledge and includes several supporting documents.

Cost estimates are addresses (p. e56) and include scale up costs which are reasonable for the scope and

intensity of the project.

Weaknesses:

none noted

Reader's Score: 25

Selection Criteria - Quality of the Project Evaluation

1. The Secretary considers the quality of the project evaluation. In determining the quality of the project evaluation to be conducted, the Secretary considers the following factors:

(1) The extent to which the methods of evaluation will include a well designed experimental study or a well designed quasi-experimental study.

(2) The extent to which the methods of evaluation will provide high-quality implementation data and performance feedback, and permit periodic assessment of progress toward achieving intended outcomes.

(3) The extent to which the evaluation will provide sufficient information about the key elements and approach of the project so as to facilitate replication or testing in other settings.

(4) The extent to which the proposed project plan includes sufficient resources to carry out the project evaluation effectively.

Note: We encourage eligible applicants to review the following technical assistance resources on evaluation: (1) What Works Clearinghouse Procedures and Standards Handbook and (2) IES/NCEE Technical Methods papers.

Strengths:

not evaluated

Weaknesses:

not evaluated

Reader's Score: 0

Selection Criteria - Quality of the Management Plan

1. The Secretary considers the quality of the management plan and personnel for the proposed project. In determining the quality of the management plan and personnel for the proposed project, the Secretary considers the following factors:

(1) The adequacy of the management plan to achieve the objectives of the proposed project on time and within budget, including clearly defined responsibilities, timelines, and milestones for accomplishing project tasks, as well as tasks related to the sustainability and scalability of the proposed project.

(2) The qualifications, including relevant training and experience, of the project director and key project personnel, especially in managing complex projects.

(3) The eligible applicant's capacity (e.g., in terms of qualified personnel, financial resources, or management capacity) to bring the proposed project to scale on a State or regional level (as appropriate, based on the results of the proposed project) working directly, or through other partners, either during or following the end of the grant period.

Strengths:

Clearly defined milestones and timelines can be found on p. e65, 66. Milestones are tied to quarterly distribution of funds ensuring accountability on many levels.

Included are example partnership grant agreements (e81-125), Memoranda of Understanding with partners Colorado Legacy Foundation who will manage Colorado schools (p. e507), - Notre Dame who will manage Indiana (p. e536) and within pages e. 507-589 all LEA's invited to participate.

The project director, key project personnel and partners are all very skilled and adept at managing complex and logistically challenging projects. (p. e69) There are clearly defined roles, responsibilities and reporting mechanisms in place and identified (p. e69-71 e74-75)

Weaknesses:

none noted

Reader's Score: 25

Priority Questions**Competitive Preference Priority - Competitive Preference Priority 6****1. Innovations for Improving Early Learning Outcomes (zero or one point)**

We give competitive preference to applications for projects that would implement innovative practices, strategies, or programs that are designed to improve educational outcomes for high-need students who are young children (birth through 3rd grade) by enhancing the quality of early learning programs. To meet this priority, applications must focus on

(a) improving young children's school readiness (including social, emotional, and cognitive readiness) so that children are prepared for success in core academic subjects (as defined in section 9101(11) of the ESEA);

(b) improving developmental milestones and standards and aligning them with appropriate outcome measures; and

(c) improving alignment, collaboration, and transitions between early learning programs that serve children from birth to age three, in preschools, and in kindergarten through third grade.

Strengths:**Weaknesses:**

Reader's Score:

Competitive Preference Priority - Competitive Preference Priority 7**1. Competitive Preference Priority 7 - Innovations that Support College Access and Success (zero or one point)**

We give competitive preference to applications for projects that would implement innovative practices, strategies, or programs that are designed to enable kindergarten through grade 12 (K-12) students, particularly high school students, to successfully prepare for, enter, and graduate from a two- or four-year college. To meet this priority, applications must include practices, strategies, or programs for K-12 students that

(a) address students preparedness and expectations related to college;

(b) help students understand issues of college affordability and the financial aid and college application processes; and

(c) provide support to students' from peers and knowledgeable adults.

Strengths:

NMSI partnership proposal is focused on high school students taking AP courses. The rigors of the coursework are preparation for expectations related to college, affordability and the college process. NMSI is focused on providing a support network of teachers and mentors with the Saturday study sessions.

Weaknesses:

Reader's Score: 1

Competitive Preference Priority - Competitive Preference Priority 8

1. Competitive Preference Priority 8 - Innovations to Address the Unique Learning Needs of Students with Disabilities and Limited English Proficient Students (zero or one point)

We give competitive preference to applications for projects that would implement innovative practices, strategies, or programs that are designed to address the unique learning needs of students with disabilities, including those who are assessed based on alternate academic achievement standards, or the linguistic and academic needs of limited English proficient students. To meet this priority, applications must provide for the implementation of particular practices, strategies, or programs that are designed to improve academic outcomes, close achievement gaps, and increase college- and career-readiness, including increasing high school graduation rates (as defined in this notice), for students with disabilities or limited English proficient students.

Strengths:

Weaknesses:

Reader's Score:

Competitive Preference Priority - Competitive Preference Priority 9

1. Competitive Preference Priority 9 - Improving Productivity (zero or one point)

We give competitive preference to applications for projects that are designed to significantly increase efficiency in the use of time, staff, money, or other resources while improving student learning or other educational outcomes (i.e., outcome per unit of resource). Such projects may include innovative and sustainable uses of technology, modification of school schedules and teacher compensation systems, use of open educational resources (as defined in this notice), or other strategies.

Strengths:

APTIP has a set of criteria that must be adopted, eg. schools refine scheduling and course admittance policies to increase access to the AP courses

Weaknesses:

none noted

Reader's Score: 1

Competitive Preference Priority - Competitive Preference Priority 10

1. Competitive Preference Priority 10 - Technology (zero or one point)

We give competitive preference to applications for projects that are designed to improve student achievement or teacher effectiveness through the use of high-quality digital tools or materials, which may include preparing teachers to use the technology to improve instruction, as well as developing, implementing, or evaluating digital tools or materials.

Strengths:

Weaknesses:

Reader's Score:

Status: Submitted
Last Updated: 9/15/11 12:00 AM

Technical Review Form

Panel #4 - 84.411B Panel - 4: 84.411B

Reader #3: *****

Applicant: National Math and Science Initiative (U411B110004)

Questions

Summary Statement - Summary Statement

1. Summary Statement (Optional)

General:

Reader's Score:

Selection Criteria - Need for Project

1. The Secretary considers the need for the project. In determining the need for the project, the Secretary considers the following factors:

(1) The magnitude of the need for the services to be provided or the activities to be carried out by the proposed project.

(2) The extent to which the proposed project represents an exceptional approach to the priority or priorities established for the competition.

(3) The importance and magnitude of the effect expected to be obtained by the proposed project, including the extent to which the project will substantially and measurably improve student achievement or student growth, close achievement gaps, decrease dropout rates, increase high school graduation rates, or increase college enrollment and completion rates. The evidence in support of the importance and magnitude of the effect would be the research-based evidence provided by the eligible applicant to support the proposed project.

Note Linking Magnitude of Effect to Presented Evidence: The Secretary notes that the extent to which the proposed project is consistent with the research evidence provided by the eligible applicant to support the proposed project is relevant to addressing the third factor of Selection Criterion A and, therefore, will be considered by the Secretary in evaluating the importance and/or magnitude of the impact expected to be obtained by the proposed project.

Strengths:

The National Math and Science Initiative's Advanced Placement Training and Incentive Program (NMSI APTIP) clearly outlines its goals of improving the STEM education for underserved populations, specifically in Colorado and Indiana school districts, utilizing a comprehensive strategy for encouraging AP courses for high school students. The determination of need in these states is supported by national NAEP data (e39), but also specific state-based data that demonstrates the low numbers of African-American and Hispanic 11th and 12h grade students who pass AP exams when compared with the total numbers from the states (e39 - e40). The proposal clearly links the state school populations with the desired need for improving STEM in underserved populations.

The APTIPS approach to addressing this need with AP coursework has statistical data support in the form of generalized APTIPS national data from previous implementations (e42), as well as three specific research studies that outline APTIPS's improvement in student STEM success. Specifically, the program documents improvement in the success of underrepresented groups such as African American and Hispanic populations on AP enrollment and exam scores (e44 - e45). The large scale implementation of this program would

provide a strong research base for how similar programs could be implemented in other underserved regions of the United States. Aside from the research benefits, the program would impact 90,900 students in Indiana and Colorado (e38) to close the achievement gaps and increase college enrollment.

Weaknesses:

The program doesn't clearly identify how the specific target groups of underrepresented students are represented in the total number of students in the project impact (e38).

Reader's Score: 24

Selection Criteria - Quality of Project Design

1. The Secretary considers the quality of the design of the proposed project. In determining the quality of the project design, the Secretary considers the following factors:

(1) The extent to which the proposed project has a clear set of goals and an explicit strategy, with actions that are
(a) Aligned with the priorities the eligible applicant is seeking to meet, and
(b) expected to result in achieving the goals, objectives, and outcomes of the proposed project.

(2) The extent to which the costs are reasonable in relation to the objectives, design, and potential significance of the proposed project.

(3) The extent to which the services to be provided by the proposed project reflect up-to-date knowledge from research and effective practice.

(4) The eligible applicant's estimate of the cost of the proposed project, which includes the start up and operating costs per student per year (including indirect costs) for reaching the total number of students proposed to be served by the project. The eligible applicant must include an estimate of the costs for the eligible applicant or others (including other partners) to reach 100,000, 250,000, and 500,000 students.

Note: The Secretary considers cost estimates both

(a) To assess the reasonableness of the costs relative to the objectives, design, and potential significance for the total number of students to be served by the proposed project, which is determined by the eligible applicant, and
(b) To understand the possible costs for the eligible applicant or others (including other partners) to reach the scaling targets of 100,000, 250,000, and 500,000 students for Validation grants. An eligible applicant is free to propose how many students it will serve under its project, and is expected to reach that number of students by the end of the grant period. The scaling targets, in contrast, are theoretical and allow peer reviewers to assess the cost-effectiveness generally of proposed projects, particularly in cases where initial investment may be required to support projects that operate at reduced cost in the future, whether implemented by the eligible applicant or any other entity. Grantees are not required to reach these numbers during the grant period.

(5) The potential and planning for the incorporation of project purposes, activities, or benefits into the ongoing work of the eligible applicant and any other partners at the end of the Validation grant.

Strengths:

NMSI's APTIP program clearly articulates it's goals (e37) and provides a clear and detailed implementation plan for the expansion of the program to Colorado and Indiana to improve the college readiness for students in STEM related fields. The program design employs a four-pronged approach defined as "Elements of Success" (e48), to implement effective program management, teacher support, student support, and awards to achieve the proposed goals. The program management utilizes non-profit organizations in each state to implement goal setting, policy support, and operational aid to local LEA's throughout the project (e49 - e50). Student support comes in the form of afterschool tutoring (e49 - e50) and teacher support is created through training, mentoring and vertical teaming (e51 - e52). The final component of awards for teachers, students, and administrators increases the efficiency of the plan. The cost per student is reasonable (e56) and acknowledges a significant decrease in funds after the first year, showing the sustainability of the project. Scalability numbers reflect the same calculations, allowing the project to continue and grow in scale after the grant is completed. NMSI has already sought additional sponsors to support this program for sustainability

beyond the implementation period, and has letters of support (Appendix G) from multiple community stakeholders. Overall, the project is well thought out and details in its approach to improving STEM education for these target communities.

Weaknesses:

It would be beneficial to provide a year to year budget allocation plan, specifically in the interest of being able to implement the program in other states and regions.

Reader's Score: 24

Selection Criteria - Quality of the Project Evaluation

1. **The Secretary considers the quality of the project evaluation. In determining the quality of the project evaluation to be conducted, the Secretary considers the following factors:**
 - (1) **The extent to which the methods of evaluation will include a well designed experimental study or a well designed quasi-experimental study.**
 - (2) **The extent to which the methods of evaluation will provide high-quality implementation data and performance feedback, and permit periodic assessment of progress toward achieving intended outcomes.**
 - (3) **The extent to which the evaluation will provide sufficient information about the key elements and approach of the project so as to facilitate replication or testing in other settings.**
 - (4) **The extent to which the proposed project plan includes sufficient resources to carry out the project evaluation effectively.**

Note: We encourage eligible applicants to review the following technical assistance resources on evaluation: (1) What Works Clearinghouse Procedures and Standards Handbook and (2) IES/NCEE Technical Methods papers.

Strengths:

Not scored

Weaknesses:

Not scored

Reader's Score: 0

Selection Criteria - Quality of the Management Plan

1. **The Secretary considers the quality of the management plan and personnel for the proposed project. In determining the quality of the management plan and personnel for the proposed project, the Secretary considers the following factors:**
 - (1) **The adequacy of the management plan to achieve the objectives of the proposed project on time and within budget, including clearly defined responsibilities, timelines, and milestones for accomplishing project tasks, as well as tasks related to the sustainability and scalability of the proposed project.**
 - (2) **The qualifications, including relevant training and experience, of the project director and key project personnel, especially in managing complex projects.**
 - (3) **The eligible applicant's capacity (e.g., in terms of qualified personnel, financial resources, or management capacity) to bring the proposed project to scale on a State or regional level (as appropriate, based on the results of the proposed project) working directly, or through other partners, either during or following the end of the grant period.**

Strengths:

As the NMSI has already implemented this AP-based program in other previous states (e38), the project is poised to be able to grow the project into Colorado and Indiana with a clear plan for teacher education, student support, and establishing community partners. The proposal clearly outlines a timeline for implementation (e65 - e66) that is detailed and concise. The chart of milestones (e603-e612) is incredibly comprehensive in its approach to utilizing measurable outcomes to guide the program throughout the grant period and make modifications as necessary. The external monitoring and budget management system provide additional systems of analysis for the program. The work of the project leaders clearly outlines their experience and commitment to the NMSI program, in terms of ability to implement programming that improves student achievement (e69 - e71). There is a diversity of skills and experiences in the organization from work in education, science, and experience implementing large-scale grants with success. Finally, the program clearly outlines its strategies for ensuring completion within the grant period based on previous experiences (e620 - e632). The management plan is comprehensive.

Weaknesses:

No weakness noted.

Reader's Score: 25

Priority Questions**Competitive Preference Priority - Competitive Preference Priority 6****1. Innovations for Improving Early Learning Outcomes (zero or one point)**

We give competitive preference to applications for projects that would implement innovative practices, strategies, or programs that are designed to improve educational outcomes for high-need students who are young children (birth through 3rd grade) by enhancing the quality of early learning programs. To meet this priority, applications must focus on

(a) improving young children's school readiness (including social, emotional, and cognitive readiness) so that children are prepared for success in core academic subjects (as defined in section 9101(11) of the ESEA);

(b) improving developmental milestones and standards and aligning them with appropriate outcome measures; and

(c) improving alignment, collaboration, and transitions between early learning programs that serve children from birth to age three, in preschools, and in kindergarten through third grade.

Strengths:

Not scored

Weaknesses:

Not scored

Reader's Score: 0

Competitive Preference Priority - Competitive Preference Priority 7**1. Competitive Preference Priority 7 - Innovations that Support College Access and Success (zero or one point)**

We give competitive preference to applications for projects that would implement innovative practices, strategies, or programs that are designed to enable kindergarten through grade 12 (K-12) students, particularly high school students, to successfully prepare for, enter, and graduate from a two- or four-year college. To meet this priority, applications must include practices, strategies, or programs for K-12

students that

(a) address students preparedness and expectations related to college;

(b) help students understand issues of college affordability and the financial aid and college application processes; and

(c) provide support to students' from peers and knowledgeable adults.

Strengths:

The project clearly outlines on pages e31 - e33 research that supports how exposure to AP classes and testing demonstrates a higher five year college graduation rate, particularly for underserved students such as low-income, African-American, and Hispanic student populations. The project goes on to directly link the APTIP program specifically to higher graduation rates for both African American and Hispanic students (e32). The program also clearly defines how it utilizes teachers and student study sessions and to provide support for the students involved in APTIP and community outreach such as parent nights to talk about college affordability and financial aid (e32). The comprehensive nature of the approach allows students to gain support from multiple venues to find increasing STEM success.

Weaknesses:

No weaknesses noted.

Reader's Score: 1

Competitive Preference Priority - Competitive Preference Priority 8

1. Competitive Preference Priority 8 - Innovations to Address the Unique Learning Needs of Students with Disabilities and Limited English Proficient Students (zero or one point)

We give competitive preference to applications for projects that would implement innovative practices, strategies, or programs that are designed to address the unique learning needs of students with disabilities, including those who are assessed based on alternate academic achievement standards, or the linguistic and academic needs of limited English proficient students. To meet this priority, applications must provide for the implementation of particular practices, strategies, or programs that are designed to improve academic outcomes, close achievement gaps, and increase college- and career-readiness, including increasing high school graduation rates (as defined in this notice), for students with disabilities or limited English proficient students.

Strengths:

Not scored

Weaknesses:

Not scored

Reader's Score: 0

Competitive Preference Priority - Competitive Preference Priority 9

1. Competitive Preference Priority 9 - Improving Productivity (zero or one point)

We give competitive preference to applications for projects that are designed to significantly increase efficiency in the use of time, staff, money, or other resources while improving student learning or other educational outcomes (i.e., outcome per unit of resource). Such projects may include innovative and sustainable uses of technology, modification of school schedules and teacher compensation systems, use of open educational resources (as defined in this notice), or other strategies.

Strengths:

The APTIP program seeks to improve efficiency in several areas that are detailed on pages e33 through e35. They require schools invested in the program to reexamine and restructure scheduling to allow students to take more than one AP course. The program also awards teachers, students, and administrators with financial compensation based on performance and putting in additional work hours. Finally, the required implementation of the vertical teaching team lays the groundwork for improved efficiency by creating a sustainable model.

Weaknesses:

No weakness noted.

Reader's Score: 1

Competitive Preference Priority - Competitive Preference Priority 10**1. Competitive Preference Priority 10 - Technology (zero or one point)**

We give competitive preference to applications for projects that are designed to improve student achievement or teacher effectiveness through the use of high-quality digital tools or materials, which may include preparing teachers to use the technology to improve instruction, as well as developing, implementing, or evaluating digital tools or materials.

Strengths:

Not scored.

Weaknesses:

Not scored.

Reader's Score: 0

Status: Submitted

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