

Status: Submitted
 Last Updated: 06/30/2010 3:29 PM

Technical Review Coversheet

Applicant: Project Lead The Way, Inc. -- , - , (U396A100045)

Reader #1:

	POINTS POSSIBLE	POINTS SCORED
Summary Statement		
1. Summary Statement	N/A	N/A
Selection Criteria		
1. A. Need for the Project and Quality of the Project Design (up to 15 Points)	15	_____
2. B. Strength of Research, Significance of Effect, and Magnitude of Effect (up to 20 Points)	20	8
3. C. Experience of the Eligible Applicant (up to 15 Points)	15	_____
4. D. Quality of the Project Evaluation (up to 15 Points)	15	6
5. E. Strategy and Capacity to Bring to Scale (up to 15 Points)	15	_____
6. F. Sustainability (up to 10 Points)	10	_____
7. G. Quality of the Management Plan and Personnel (up to 10 Points)	10	_____
Competitive Preference		
1. Competitive Preference 5: Innovations for Improving Early Learning Outcomes (0 or 1 Point)	1	_____
2. Competitive Preference 6: Innovations That Support College Access and Success (0 or 1 Point)	1	_____
3. Competitive Preference 7: Innovations To Address the Unique Learning Needs of Students With	1	_____

Disabilities and Limited English Proficient Students
(0 or 1 Point)

4. Competitive Preference 8: Innovations That Serve Schools in Rural LEAs (0, 1, or 2 Points)	2	_____
TOTAL	105	14

Technical Review Form

Scale Up 1: 84.396A

Reader #1:

Applicant: Project Lead The Way, Inc. -- , - , (U396A100045)

Summary Statement

1. Summary State

Selection Criteria

1. A. Need for the Project and Quality of the Project Design (up to 15 Points)

In determining the need for the project and quality of the design of the proposed project, the Secretary considers the following factors:

(1) The extent to which the proposed project represents an exceptional approach to the priorities the eligible applicant is seeking to meet (i.e., addresses a largely unmet need, particularly for high-need students, and is a practice, strategy, or program that has not already been widely adopted).

(2) 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,

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

Strengths

Weaknesses

2. B. Strength of Research, Significance of Effect, and Magnitude of Effect (up to 20

Points)

The Secretary considers the strength of the existing research evidence, including the internal validity (strength of causal conclusions) and external validity (generalizability) of the effects reported in prior research, on whether the proposed project will improve student achievement or student growth, close achievement gaps, decrease dropout rates, increase high school graduation rates, or increase college enrollment and completion rates. Eligible applicants may also demonstrate success through an intermediate variable that is strongly correlated with improving these outcomes, such as teacher or principal effectiveness.

In determining the strength of the existing research evidence, the Secretary considers the following factors:

(1) The extent to which the eligible applicant demonstrates that there is strong evidence (as defined in the Notice Inviting Applications) that its implementation of the proposed practice, strategy, or program will have a statistically significant, substantial, and important effect on improving student achievement or student growth, closing achievement gaps, decreasing dropout rates, increasing high school graduation rates, or increasing college enrollment and completion rates.

(2) 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.

Strengths

The applicant provides several quasi-experimental studies of Project Lead The Way which demonstrate statistically significant effects and moderate effect sizes. Results include eliminating achievement gaps between students over three years (though the size of the initial gap is unclear) and increasing college readiness.

Weaknesses

The studies cited have relatively small samples -- some extremely small -- which casts doubt upon the studies' external validity. This is particularly true of Phelps et al. (2008), which included a sample of only 27 PLTW students. It also does not appear that Phelps et al. is quasi-experimental according to the criteria in the Notice Inviting Applications because its design is not matched comparison group, interrupted time series, or regression discontinuity. Similarly, the Galt study does not provide enough information

to know whether it meets the criterion of an experimental or quasi-experimental study; it appears simply to be a statistical report without any discussion of co-variates.

Several of the studies, including Phelps et al. and Galt focus on only a single school or district, thus creating additional questions about external validity because the schools studied may not have the same characteristics as the schools included in the scale-up project.

Effect sizes are given only for the Kingsbury Center study. These effects are small to moderate.

The use of a virtual comparison group raises the concern about the validity of the match between control and treatment groups. It is not clear that the virtual control group is impacted by the same environmental factors, for example, that may be at play for the PLTW students.

There are no studies cited that concern actual college enrollment and completion of PLTW students in comparison with others. This seems like a serious omission given the applicant's claims of the long-term impact of the program and suggestion that the program can address the nation's shortage of STEM professionals. Two studies on the relationship between participation in PLTW and college attendance that are included elsewhere in the application (pp. 11-12), but the only easily accessible study (Walcerz, 2010) is descriptive and makes no correlational claims, let alone employ experimental or quasi-experimental designs.

Reader's Score: 8

3. C. Experience of the Eligible Applicant (up to 15 Points)

In determining the experience of the eligible applicant, the Secretary considers the following factors:

(1) The past performance of the eligible applicant in implementing large, complex, and rapidly growing projects.

(2) The extent to which an eligible applicant provides information and data demonstrating that

(a) In the case of an eligible applicant that is an LEA, the LEA has -

(i) Significantly closed the achievement gaps between groups of students described in section 1111(b)(2) of the ESEA, or significantly increased student achievement for all groups of students described in such section; and

(ii) Made significant improvements in other areas, such as graduation rates or increased recruitment and placement of high-quality teachers and principals, as demonstrated with meaningful data; or

(b) In the case of an eligible applicant that includes a nonprofit organization, the nonprofit organization has significantly improved student achievement, attainment, or retention through its record of work with an LEA or schools.

Strengths

Weaknesses

4. D. Quality of the Project Evaluation (up to 15 Points)

In determining the quality of the evaluation, the Secretary considers the following factors:

(1) The extent to which the methods of evaluation will include a well designed experimental study or, if a well-designed experimental study of the project is not possible, the extent to which the methods of evaluation will include a well-designed quasi-experimental study.

(2) The extent to which, for either an experimental study or a quasi-experimental study, the study will be conducted of the practice, strategy, or program as implemented at scale.

(3) 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.

(4) 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.

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

(6) The extent to which the proposed evaluation is rigorous, independent, and neither the program developer nor the project implementer will evaluate the impact of the project.

Strengths

The evaluation narrative goes into admirable detail about the collection of multiple kinds of student performance data that should provide a rich set of outcomes measures from the greatly expanded network of PLTW programs and participating students that results from the scale-up effort. A comparison

group is used to conduct a quasi-experimental study.

There is an intention to use the data collected for the evaluation also will be used to inform teachers and school leaders, who can then make adjustments to attempt to improve student learning outcomes. The evaluation will collect longitudinal data that will enable PLTW to assess the impact of its programs on the post-secondary readiness of student participants.

Questions asked for the evaluation (see Appendices, p. e51) make it clear that the evaluation is concerned with the ability of PLTW to retain program quality as it is scaled up.

The project evaluation will be performed by an organization independent of PLTW with a national reputation and considerable experience in program evaluation and research study design.

The applicant devotes considerable resources to the proposed evaluation - \$12.5 million out of a total project budget of \$60 million, or more than 20% of the entire project budget.

Weaknesses

Although there is great thought and detail provided about data collection, there is virtually no detail about the evaluation methodology to be employed and no discussion of how the applicant will handle threats to validity and other challenges. There is lack of clarity about the evaluator's "Virtual Comparison Group" the applicant apparently intends to employ as the control necessary to give the evaluation quasi-experimental status. This seems to be inconsistent with the criteria for quasi-experimental design noted in the Notice Inviting Applications, as it may violate the requirement of a single time period in which the control and treatment group are studied. In any case, it is not clear why the applicant insists upon this device instead of using as a comparison group the non-PLTW students in the districts where the program is being scaled up -- students who are likely to be similar along a number of characteristics.

Although the applicant intends to collect longitudinal data, there is a lack of detail concerning data on PLTW participants' college attendance in order to assess the impact of PLTW on students' post-secondary careers. It appears that, through the assignment of unique identifiers to PLTW students and automatic entry of PLTW data into the National Student Clearinghouse database, the applicant will be able to track the college trajectories of its program participants. It is not clear, however, what students the applicant intends to use as a comparison or control group in order to provide stronger

evidence for PLTW impact on students' post-secondary careers.

There is no discussion of how data will be collected to facilitate program improvement at the implementation sites. There is the expectation that programs will respond if the various student measures to be employed are not satisfactory, but it is not clear how this will be used to alter various features of local programs. How might the data indicate, for example, that professional development for teachers at particular sites may be in need of improvement or that the curriculum might need to be tweaked to benefit certain students or that teachers at particular sites are not getting adequate support from their principals?

There is also concern about role confusion of the project evaluation organization NWEA. In some of the information dissemination responsibilities assigned to NWEA, the distinction between their function as an independent evaluator and a technical assistance provider to PLTW and the project scale-up effort becomes blurred. There is mention of a "third party" to use the data generated in order to provide a summative evaluation of PLTW; this, presumably, would be the role of the evaluator, and there is no information about the qualifications of the third party. In sum, there appear to be serious possibilities for bias and lack of independence in the evaluation as described

Reader's Score: 6

5. E. Strategy and Capacity to Bring to Scale (up to 15 Points)

In determining the quality of the strategy and capacity to bring the proposed project to scale, the Secretary considers:

- (1) The number of students proposed to be reached by the proposed project and the capacity of the eligible applicant and any other partners to reach the proposed number of students during the course of the grant period.**
- (2) 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 national, regional, or State level working directly, or through partners, either during or following the end of the grant period.**
- (3) The feasibility of the proposed project to be replicated successfully, if positive results are obtained, in a variety of settings and with a variety of student populations. Evidence of this ability includes the proposed project's demonstrated success in multiple settings and with different types of students, the availability of resources and expertise required for implementing the project with fidelity, and the proposed project's evidence of relative ease of use or user satisfaction.**

(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, 500,000, and 1,000,000 students.

(5) The mechanisms the eligible applicant will use to broadly disseminate information on its project so as to support replication.

Strengths

Weaknesses

6. F. Sustainability (up to 10 Points)

In determining the adequacy of resources for the proposed project, the Secretary considers the following factors:

(1) The extent to which the eligible applicant demonstrates that it has the resources to operate the project beyond the length of the Scale-up grant, including a multi-year financial and operating model and accompanying plan; the demonstrated commitment of any other partners; and evidence of broad support from stakeholders (e.g., State educational agencies, teachers' unions) critical to the project's long-term success.

(2) 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 Scale-Up grant.

Strengths

Weaknesses

7. G. Quality of the Management Plan and Personnel (up to 10 Points)

In determining the quality of the management plan and personnel for the proposed project, the Secretary considers:

(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 large, complex, and rapidly growing projects.

(3) The qualifications, including relevant expertise and experience, of the project director and key personnel of the independent evaluator, especially in designing and conducting large-scale experimental and quasi-experimental studies of educational initiatives.

Strengths

Weaknesses

Competitive Preference

1. Competitive Preference 5: Innovations for Improving Early Learning Outcomes (0 or 1 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

2. Competitive Preference 6: Innovations That Support College Access and Success (0 or 1 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

3. Competitive Preference 7: Innovations To Address the Unique Learning Needs of Students With Disabilities and Limited English Proficient Students (0 or 1 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

4. Competitive Preference 8: Innovations That Serve Schools in Rural LEAs (0, 1, or 2 Points)

We give competitive preference to applications for projects that would implement innovative practices, strategies, or programs that are designed to focus on the unique challenges of high-need students in schools within a rural LEA (as defined in this notice) and address the particular challenges faced by students in these schools. To meet this priority, applications must include practices, strategies, or programs that are designed to improve student achievement or student growth, close achievement gaps, decrease dropout rates, increase high school graduation rates, or improve teacher and principal effectiveness in one or more rural LEAs.

Strengths

Weaknesses

Status: Submitted

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Status: Submitted

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Technical Review Coversheet

Applicant: Project Lead The Way, Inc. -- , - , (U396A100045)

Reader #2:

	POINTS POSSIBLE	POINTS SCORED
Summary Statement		
1. Summary Statement	N/A	N/A
Selection Criteria		
1. A. Need for the Project and Quality of the Project Design (up to 15 Points)	15	11
2. B. Strength of Research, Significance of Effect, and Magnitude of Effect (up to 20 Points)	20	_____
3. C. Experience of the Eligible Applicant (up to 15 Points)	15	10
4. D. Quality of the Project Evaluation (up to 15 Points)	15	_____
5. E. Strategy and Capacity to Bring to Scale (up to 15 Points)	15	10
6. F. Sustainability (up to 10 Points)	10	8
7. G. Quality of the Management Plan and Personnel (up to 10 Points)	10	5
Competitive Preference		
1. Competitive Preference 5: Innovations for Improving Early Learning Outcomes (0 or 1 Point)	1	0
2. Competitive Preference 6: Innovations That Support College Access and Success (0 or 1 Point)	1	1
3. Competitive Preference 7: Innovations To Address	1	1

the Unique Learning Needs of Students With Disabilities and Limited English Proficient Students (0 or 1 Point)

4. Competitive Preference 8: Innovations That Serve Schools in Rural LEAs (0, 1, or 2 Points)	2	1
TOTAL	105	47

Technical Review Form

Scale Up 1: 84.396A

Reader #2:

Applicant: Project Lead The Way, Inc. -- , - , (U396A100045)

Summary Statement

1. Summary State

Selection Criteria

1. A. Need for the Project and Quality of the Project Design (up to 15 Points)

In determining the need for the project and quality of the design of the proposed project, the Secretary considers the following factors:

(1) The extent to which the proposed project represents an exceptional approach to the priorities the eligible applicant is seeking to meet (i.e., addresses a largely unmet need, particularly for high-need students, and is a practice, strategy, or program that has not already been widely adopted).

(2) 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,

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

Strengths

The Activity-, Problem- and Project-Based (APPB) Learning Model includes

the type of instructional strategies that are used with second language speakers and special needs students. The fact that there is not a textbook requires the teachers to be well trained in the strategies and work with the students to be successful in STEM (Science, Technology, Engineering, and Math) curricula. Currently, the number of minorities, women, and low socioeconomic students entering the STEM fields is limited. Only districts with the funding to implement Project Lead the Way (PLTW) have been able to access this program. Therefore, high risk students may not have been enrolled in these schools/districts in order to benefit. In this proposal, Project Lead the Way seeks to target schools with funding to implement these programs and purchase the cutting edge technology required. Two of the three goals appear to be achievable during the life of the grant. The Objectives and outcomes are clear; utilize assessments to measure success; and will use a tracking system to follow students into college to compare data to national trend data. (p. 6)

Weaknesses

This program has been widely adopted (geographically) but data on high risk students or rural areas were not available. To date the program has only reached 1.34% of middle and high school students in the United States. (p. 3). Goal 1, Close the Achievement Gap and Goal 2, Prepare students for demanding college STEM majors and careers, are goals that are achievable during the life of the grant. Goal 3, Increase American competitiveness by 2015-2016, is a goal that will be difficult to measure and make a direct link to this proposal. Growing the project from 350,000 to 1,400,000 students during this time does not immediately equate to increased competitiveness (p. 4).

Reader's Score: 11

2. B. Strength of Research, Significance of Effect, and Magnitude of Effect (up to 20 Points)

The Secretary considers the strength of the existing research evidence, including the internal validity (strength of causal conclusions) and external validity (generalizability) of the effects reported in prior research, on whether the proposed project will improve student achievement or student growth, close achievement gaps, decrease dropout rates, increase high school graduation rates, or increase college enrollment and completion rates. Eligible applicants may also demonstrate success through an intermediate variable that is strongly correlated with improving these outcomes, such as teacher or principal effectiveness.

In determining the strength of the existing research evidence, the Secretary considers the following factors:

(1) The extent to which the eligible applicant demonstrates that there is strong evidence (as defined in the Notice Inviting Applications) that its implementation of the proposed practice, strategy, or program will have a statistically significant, substantial, and important effect on improving student achievement or student growth, closing achievement gaps, decreasing dropout rates, increasing high school graduation rates, or increasing college enrollment and completion rates.

(2) 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.

Strengths

Weaknesses

3. C. Experience of the Eligible Applicant (up to 15 Points)

In determining the experience of the eligible applicant, the Secretary considers the following factors:

(1) The past performance of the eligible applicant in implementing large, complex, and rapidly growing projects.

(2) The extent to which an eligible applicant provides information and data demonstrating that

(a) In the case of an eligible applicant that is an LEA, the LEA has -

(i) Significantly closed the achievement gaps between groups of students described in section 1111(b)(2) of the ESEA, or significantly increased student achievement for all groups of students described in such section; and

(ii) Made significant improvements in other areas, such as graduation rates or increased recruitment and placement of high-quality teachers and principals, as demonstrated with meaningful data; or

(b) In the case of an eligible applicant that includes a nonprofit organization, the nonprofit organization has significantly improved student achievement, attainment, or retention through its record of work with an LEA or schools.

Strengths

Project Lead the Way has been involved in large scale implementation since

1996 (p.24) and has shown growth in implementation by 20% per year (p.3). In the professional development component, which is essential to fidelity of implementation, more than 13,000 teachers have participated in PLTW training. Over 10,000 counselors have received training to support students/parents and interface with colleges and universities(p. 13). PLTW has a network of businesses and corporations that work with the schools for mentorships and internships for the students in this program. The work of PLTW with bilingual students in Texas and Milwaukee show the flexibility the program provides to support students with second language needs. Due to the project-based nature of the program, students who experience learning difficulties in a traditional classroom, experience success (p. 14-15). The dual enrollment in high school and college level courses provides the motivation for students to stay in school and decrease the number of college courses required. PLTW has agreements with over 50 colleges and universities that offer credit for PLTW courses which reduces the cost of college. The Academy of Engineering allows students to have paid internships and scholarships. (p.34) This program has nine methods for articulating credit for PLTW courses with colleges and universities.

Weaknesses

The applicant did not provide sufficient data to determine the success of this program during the past fourteen years. No mention was made of any success with rural communities in the application.

Reader's Score: 10

4. D. Quality of the Project Evaluation (up to 15 Points)

In determining the quality of the evaluation, the Secretary considers the following factors:

(1) The extent to which the methods of evaluation will include a well designed experimental study or, if a well-designed experimental study of the project is not possible, the extent to which the methods of evaluation will include a well-designed quasi-experimental study.

(2) The extent to which, for either an experimental study or a quasi-experimental study, the study will be conducted of the practice, strategy, or program as implemented at scale.

(3) 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.

(4) 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.

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

(6) The extent to which the proposed evaluation is rigorous, independent, and neither the program developer nor the project implementer will evaluate the impact of the project.

Strengths

Weaknesses

5. E. Strategy and Capacity to Bring to Scale (up to 15 Points)

In determining the quality of the strategy and capacity to bring the proposed project to scale, the Secretary considers:

(1) The number of students proposed to be reached by the proposed project and the capacity of the eligible applicant and any other partners to reach the proposed number of students during the course of the grant period.

(2) 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 national, regional, or State level working directly, or through partners, either during or following the end of the grant period.

(3) The feasibility of the proposed project to be replicated successfully, if positive results are obtained, in a variety of settings and with a variety of student populations. Evidence of this ability includes the proposed project's demonstrated success in multiple settings and with different types of students, the availability of resources and expertise required for implementing the project with fidelity, and the proposed project's evidence of relative ease of use or user satisfaction.

(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, 500,000, and 1,000,000 students.

(5) The mechanisms the eligible applicant will use to broadly disseminate information on its project so as to support replication.

Strengths

The goal of PLTW is to reach 1,400,000 students by the end of the grant timeframe. This appears to be feasible based on past performance. PLTW began in 1996 with 12 schools in New York and now serves 350,000 students with the assistance of 13,000 trained teachers. The ability to implement in any state or the District of Columbia is not a problem for PLTW as it currently operates in all of these geographic locations. The International Baccalaureate (IB) has partnered with PLTW to offer an IB Career-related Certificate with the PLTW Pathway to Engineering or Biomedical Sciences.

PLTW plans to hire a full time PLTW Grant Funding Project Director who will report directly to the CEO which shows commitment from the top. In addition, the qualified personnel for the non-profit are all highly qualified by virtue of education, training, and/or involvement in the areas of focus of PLTW. The number of "Core Training Instructors" includes a PLTW Master Teachers and Affiliate Professors and will serve as the trainers of teachers in this grant program. PLTW also provides a Virtual Academy for support and training of teachers in the program. Counselor Conferences provide the training at the state level and can easily be offered in any state. The addition of Northwest Evaluation Association (NWEA) as a partner for the assessment and evaluation adds a level of credibility to the process.

Involvement and support at the site level provides for a commitment to the success of PLTW. The School Partnership Team provides support, oversight, and external contacts, public relations, and financial support for the PLTW sustainability. (p.30) The team includes teachers, counselors, administrators, parents and members of the business communities.

Satisfaction by students and teachers appears to be a strength of this application. Students were surveyed in 2008-2009 regarding PLTW and reported high satisfaction with the program and felt that PLTW increased their ability to succeed in college. (p. 41) Teachers completed a satisfaction survey and indicated that 91.6% were highly satisfied with the Summer Training Institute. (p. 41)

A key strength of this application is that the cost of implementation decreases based on the number of students served. The amount decreases from \$474 for 100,000 students to \$234 for 500,000. When the number of students served reaches 1,000,000, the amount per student decreases to \$145. In addition, PLTW is reducing the costs by 10% each year as part of their management practices to assist schools in making this a more affordable program.

PLTW provides a variety of scenarios for funding that allows schools/districts flexibility in funding allocations. There is also a reduction in costs by partners with PLTW for hardware purchased by the sites.

The breakdown of costs for urban versus rural areas illustrates an understanding of the costs of implementing PLTW in these two environments. The variety of scenarios offered for implementing PLTW in

rural areas that are smaller and sometimes isolated is a real strength of this application.

Weaknesses

Data were lacking in the area of "ease of use" except to make the assumption that due to the growth of PLTW this area was addressed. It would be a stronger statement to have data to directly relate the program growth to the ability to receive training, support, research, etc.

The application assumes that Perkins Funding and CTE Funding will continue through the life of the grant. There is no mention of how to maintain the programs should these two funding sources no longer be available to schools.

The mechanisms for project dissemination to support replication do not address how to specifically target high risk and rural areas. It may prove helpful to question rural areas currently implementing PLTW to determine how they receive information on programs. With the current economic concerns, conferences may not be the most efficient method for disseminating information.

Reader's Score: 10

6. F. Sustainability (up to 10 Points)

In determining the adequacy of resources for the proposed project, the Secretary considers the following factors:

(1) The extent to which the eligible applicant demonstrates that it has the resources to operate the project beyond the length of the Scale-up grant, including a multi-year financial and operating model and accompanying plan; the demonstrated commitment of any other partners; and evidence of broad support from stakeholders (e.g., State educational agencies, teachers' unions) critical to the project's long-term success.

(2) 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 Scale-Up grant.

Strengths

Project Lead the Way has operated without the i3 funding for the last ten years and from review of their management plan it can continue to operate at the grass roots level. The strength of this application is to ensure equity of opportunity for students from all socio-economic, ethnic, and geographic locations, particularly for students in areas where resources are otherwise too

limited to implement the project.

Prior to the i3 grant it appears that PLTW was reducing costs by 10% to assist schools in implementation which allows for keeping current in technology.

The reduction in per-pupil costs based on increasing numbers is a real strength because it allows additional sections of the program to be added at a fraction of the initial costs.

The lack of textbooks allows schools/districts to reallocate these funds to purchase needed materials over time.

The ongoing professional development online with the Virtual Academy allows for sustainability for ongoing development of teachers. This is particularly important in rural areas that are far from universities or other districts.

The quality of the long-term analysis by NWEA will provide the data necessary to document the effectiveness of PLTW for additional support from nonprofits, foundations, grants, community support of tax increases, etc.

The list of partner associations indicates areas that are focused in science, math, and technology and are a broad base geographically.

Twenty-four percent of the states provided letters of support for this i3 Grant with the grassroots approach to implementation that has occurred to date.

The real strength of this grant is that the applicant has implemented PLTW and with the i3 grant is attempting to expand into areas with high risk students and rural areas. The applicant and other partners can continue after the Scale-up grant but would be unable to reach the large number of students the grant can support.

Weaknesses

A weakness of the application is the assumption that funding from Perkins and CTE will be available during the life of the grant.

PLTW states it has an outstanding track record of partnerships to raise funds, but there is no specific evidence in the document as to the partners and amounts raised.

Reader's Score: 8

7. G. Quality of the Management Plan and Personnel (up to 10 Points)

In determining the quality of the management plan and personnel for the proposed project, the Secretary considers:

(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 large, complex, and rapidly growing projects.

(3) The qualifications, including relevant expertise and experience, of the project director and key personnel of the independent evaluator, especially in designing and conducting large-scale experimental and quasi-experimental studies of educational initiatives.

Strengths

The background of the CEO illustrates his ability to manage a complex project. The job description of the Project Director clearly seeks someone with experience in large scale project management. The Independent Evaluator, NWEA, is nationally known for their quality assessments and research design. The strength of this group is in their growth model and data base.

Weaknesses

The management plan would be stronger if the timeline included fund raising benchmarks and the process to be utilized. PLTW indicates that they will hire the Project Director prior to notification of i3award. A concern is that the salary for this person is listed as a cost item for the I3 funds. The timeline clearly defined the responsibilities and milestones for the CEO, DOE, and Project Director. Providing responsibilities and timelines for the other staff would indicate clearly defined roles and responsibilities of all staff in this endeavor. The Project Director has not been identified and the timeline indicates he/she will be hired by June 2010 which is prior to the allocation of the i3 grants. Although, NWEA is the Independent Evaluator, the Project Evaluator's resume does not elaborate on her skills in designing and implementing large scale experimental or quasi-experimental studies. Providing skills in this area in the resume would provide a comfort level that this individual has the skills to support this application.

Reader's Score: 5

Competitive Preference

1. Competitive Preference 5: Innovations for Improving Early Learning Outcomes (0 or 1 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

Not addressed by the applicant as a priority.

Reader's Score: 0

2. Competitive Preference 6: Innovations That Support College Access and Success (0 or 1 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 applicant clearly addresses these requirements through the rigor of their courses and collaboration with IB. The strength in this area is around the number of colleges and universities that grant college credit or advanced standing for PLTW courses. This helps to address the issue of affordability of college for the students involved. The use of end of course assessments and PLTW certifications provides motivation and incentives for students to go to college with credits and have the skills to be successful.

The use of trained counselors to work with parents/students and liaison with colleges and universities provides that key support students need to be successful in college/universities (p.14).

Weaknesses

None found.

Reader's Score: 1

3. Competitive Preference 7: Innovations To Address the Unique Learning Needs of Students With Disabilities and Limited English Proficient Students (0 or 1 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

The instructional strategies utilized by PLTW provide for differentiation of instruction which is essential for the success of high risk students. The use of state of the art technology provides the students with a challenge and support for their learning. The multisensory teaching approach is key to the success of Limited English Proficiency students and students with disabilities.

The use of marketing materials in the native languages of specific schools and the flexibility of the materials to be used in a bilingual format provide access to more high risk students.

Weaknesses

None found.

Reader's Score: 1

4. Competitive Preference 8: Innovations That Serve Schools in Rural LEAs (0, 1, or

2 Points)

We give competitive preference to applications for projects that would implement innovative practices, strategies, or programs that are designed to focus on the unique challenges of high-need students in schools within a rural LEA (as defined in this notice) and address the particular challenges faced by students in these schools. To meet this priority, applications must include practices, strategies, or programs that are designed to improve student achievement or student growth, close achievement gaps, decrease dropout rates, increase high school graduation rates, or improve teacher and principal effectiveness in one or more rural LEAs.

Strengths

PLTW has set aside a certain number of rural school sub-grants in each phase of the process.
The rural partnerships that PLTW is working with have strong common goals that align with the programs in PLTW.
The experiences that PLTW has had with rural schools provides the framework for assisting a growing number of rural schools/districts. PLTW assists the schools in finding partners and customizing PLTW in their particular situation and locale.
PLTW understands that scheduling, lack of technology, and isolation can be mitigated with creativity and flexibility.
The strengths of partnering with colleges and Regional Educational Centers (or BOCES) will be an asset as the applicant expands the program into rural areas.

Weaknesses

None found.

Reader's Score: 1

Status: Submitted

Last Updated: 07/03/2010 8:38 AM

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Status: Submitted

Last Updated: 07/02/2010 9:25 AM

Technical Review Coversheet

Applicant: Project Lead The Way, Inc. -- , - , (U396A100045)

Reader #3:

	POINTS POSSIBLE	POINTS SCORED
Summary Statement		
1. Summary Statement	N/A	N/A
Selection Criteria		
1. A. Need for the Project and Quality of the Project Design (up to 15 Points)	15	11
2. B. Strength of Research, Significance of Effect, and Magnitude of Effect (up to 20 Points)	20	_____
3. C. Experience of the Eligible Applicant (up to 15 Points)	15	9
4. D. Quality of the Project Evaluation (up to 15 Points)	15	_____
5. E. Strategy and Capacity to Bring to Scale (up to 15 Points)	15	9
6. F. Sustainability (up to 10 Points)	10	7
7. G. Quality of the Management Plan and Personnel (up to 10 Points)	10	5
Competitive Preference		
1. Competitive Preference 5: Innovations for Improving Early Learning Outcomes (0 or 1 Point)	1	0
2. Competitive Preference 6: Innovations That Support College Access and Success (0 or 1 Point)	1	0
3. Competitive Preference 7: Innovations To Address	1	0

the Unique Learning Needs of Students With Disabilities and Limited English Proficient Students (0 or 1 Point)

4. Competitive Preference 8: Innovations That Serve Schools in Rural LEAs (0, 1, or 2 Points)	2	1
TOTAL	105	42

Technical Review Form

Scale Up 1: 84.396A

Reader #3:

Applicant: Project Lead The Way, Inc. -- , - , (U396A100045)

Summary Statement

1. Summary State

Selection Criteria

1. A. Need for the Project and Quality of the Project Design (up to 15 Points)

In determining the need for the project and quality of the design of the proposed project, the Secretary considers the following factors:

(1) The extent to which the proposed project represents an exceptional approach to the priorities the eligible applicant is seeking to meet (i.e., addresses a largely unmet need, particularly for high-need students, and is a practice, strategy, or program that has not already been widely adopted).

(2) 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,

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

Strengths

1. The need to expand PLTW as a viable math and science program is

important. For many students PLTW will be their only access to high quality math and science in an experiential approach.

2. The program goals are clear and the alignment with the newly released Common Core is a good step.

b. Partnering with International Baccalaureate lends prestige to PLTW and will assist in reaching its goals.

Weaknesses

1. The proposed project does not constitute an exceptional approach to the priorities the applicant is seeking to meet. In place since 1996, it has not been widely adopted. While a good program with commendable results, the program has made strides but not to the level anticipated.

2. While the goals, objectives, and outcomes are evident, the full design is not as clear as to how IB and PLTW will work together.

Reader's Score: 11

2. B. Strength of Research, Significance of Effect, and Magnitude of Effect (up to 20 Points)

The Secretary considers the strength of the existing research evidence, including the internal validity (strength of causal conclusions) and external validity (generalizability) of the effects reported in prior research, on whether the proposed project will improve student achievement or student growth, close achievement gaps, decrease dropout rates, increase high school graduation rates, or increase college enrollment and completion rates. Eligible applicants may also demonstrate success through an intermediate variable that is strongly correlated with improving these outcomes, such as teacher or principal effectiveness.

In determining the strength of the existing research evidence, the Secretary considers the following factors:

(1) The extent to which the eligible applicant demonstrates that there is strong evidence (as defined in the Notice Inviting Applications) that its implementation of the proposed practice, strategy, or program will have a statistically significant, substantial, and important effect on improving student achievement or student growth, closing achievement gaps, decreasing dropout rates, increasing high school graduation rates, or increasing college enrollment and completion rates.

(2) 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.

Strengths

Weaknesses

3. C. Experience of the Eligible Applicant (up to 15 Points)

In determining the experience of the eligible applicant, the Secretary considers the following factors:

(1) The past performance of the eligible applicant in implementing large, complex, and rapidly growing projects.

(2) The extent to which an eligible applicant provides information and data demonstrating that

(a) In the case of an eligible applicant that is an LEA, the LEA has -

(i) Significantly closed the achievement gaps between groups of students described in section 1111(b)(2) of the ESEA, or significantly increased student achievement for all groups of students described in such section; and

(ii) Made significant improvements in other areas, such as graduation rates or increased recruitment and placement of high-quality teachers and principals, as demonstrated with meaningful data; or

(b) In the case of an eligible applicant that includes a nonprofit organization, the nonprofit organization has significantly improved student achievement, attainment, or retention through its record of work with an LEA or schools.

Strengths

1. Established in 1996, PLTW has provided STEM education in schools. PLTW does have some performance evidence for scaling up.

Weaknesses

1. PLTW has not demonstrated the ability to implement large projects. The program has been implemented narrowly in numerous high schools. Partner roles in the scale up were not clear.
2. Evidence and data of reducing the achievement gap and improving graduation rates and achievement were not clear nor fully developed

Reader's Score: 9

4. D. Quality of the Project Evaluation (up to 15 Points)

In determining the quality of the evaluation, the Secretary considers the following factors:

- (1) The extent to which the methods of evaluation will include a well designed experimental study or, if a well-designed experimental study of the project is not possible, the extent to which the methods of evaluation will include a well-designed quasi-experimental study.**
- (2) The extent to which, for either an experimental study or a quasi-experimental study, the study will be conducted of the practice, strategy, or program as implemented at scale.**
- (3) 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.**
- (4) 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.**
- (5) The extent to which the proposed project plan includes sufficient resources to carry out the project evaluation effectively.**
- (6) The extent to which the proposed evaluation is rigorous, independent, and neither the program developer nor the project implementer will evaluate the impact of the project.**

Strengths

Weaknesses

5. E. Strategy and Capacity to Bring to Scale (up to 15 Points)

In determining the quality of the strategy and capacity to bring the proposed project to scale, the Secretary considers:

- (1) The number of students proposed to be reached by the proposed project and the capacity of the eligible applicant and any other partners to reach the proposed number of students during the course of the grant period.**
- (2) 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 national, regional, or State level working directly, or through partners, either**

during or following the end of the grant period.

(3) The feasibility of the proposed project to be replicated successfully, if positive results are obtained, in a variety of settings and with a variety of student populations. Evidence of this ability includes the proposed project's demonstrated success in multiple settings and with different types of students, the availability of resources and expertise required for implementing the project with fidelity, and the proposed project's evidence of relative ease of use or user satisfaction.

(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, 500,000, and 1,000,000 students.

(5) The mechanisms the eligible applicant will use to broadly disseminate information on its project so as to support replication.

Strengths

1. PLTW's goal is to reach 1.4 million students (p.e37) by the end of the scale-up grant period.
2. PLTW has demonstrated capacity to scale up and has a history of working with states and regions. Qualifications and new partnerships extend PLTW's ability to work directly at the national, state, and regional levels during and beyond the grant period.

Weaknesses

1. The projected number of students, while ambitious, is not realistic in terms of what will need to happen in every school community across the country.
2. The applicant's capacity was not sufficiently defined to carry out the projected population of students to be served. The actual costs do not take into consideration staff costs at the local level nor the cost of building local commitment.
3. The plan for PLTW replication in multiple settings with relative ease was not defined in this proposal.
4. The actual costs of bringing this to scale were not fully developed based on the numbers of factors that influence the implementation of PLTW at the local level. The student and training costs did not take into consideration the ability of a local state particularly a rural state, to secure math and science teachers who can deliver the course content to the number of students targeted.
5. The replication plan was poorly developed for a program in place since

1996. The proposed methodologies included national meetings and other generalized approaches that did not present the high level of visibility regarding the scale-up projections proposed.

Reader's Score: 9

6. F. Sustainability (up to 10 Points)

In determining the adequacy of resources for the proposed project, the Secretary considers the following factors:

(1) The extent to which the eligible applicant demonstrates that it has the resources to operate the project beyond the length of the Scale-up grant, including a multi-year financial and operating model and accompanying plan; the demonstrated commitment of any other partners; and evidence of broad support from stakeholders (e.g., State educational agencies, teachers' unions) critical to the project's long-term success.

(2) 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 Scale-Up grant.

Strengths

1. The long term sustainability is demonstrated by multi-year partnership commitments and that of local school districts embracing the model into the math and science classrooms. Buy in from state educational agencies and other partners support the long term success of PLTW.
2. PLTW's incorporation into the ongoing work of school districts beyond the Scale-Up grant is shown through commitments locally and at the state level wherein commitments, training, and programming have been established.

Weaknesses

1. The ability to operate the proposal to scale after the grant period is dependent upon many conditions. Its dependence upon federal and local funds may not be realistic based on the realities and commitments at the local level.
2. An additional challenge is the ability at the local level to employ high quality math and science teachers to meet the demands of increased numbers of students participating in PLTW. Changes in leadership locally and regionally also deter former commitments based on new local priorities.

Reader's Score: 7

7. G. Quality of the Management Plan and Personnel (up to 10 Points)

In determining the quality of the management plan and personnel for the proposed project, the Secretary considers:

- (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 large, complex, and rapidly growing projects.
- (3) The qualifications, including relevant expertise and experience, of the project director and key personnel of the independent evaluator, especially in designing and conducting large-scale experimental and quasi-experimental studies of educational initiatives.

Strengths

1. The plan offers a moderately well-developed plan that depends upon the ability with PLTW guidance to implement PLTW at the local school level.
2. PLTW has a history of development, the qualifications of key personnel are of high quality, and PLTW staff have experience building complex programs that will be implemented locally.

Weaknesses

1. The adequacy of the management plan is tied to multiple factors beyond the control of the applicant. For example, to achieve the goal of reaching every middle and high school student, the applicant must achieve agreement within each partner state to adopt this method of instruction. The management plan does not explain how they will organize at the state and local level to scale up and sustain to the proposed levels.
2. The qualifications of key staff are sufficient but the realities of the roll out of such a project will require many regional and local staff to bring this program to scale.
3. NWEA is not recognized as a program evaluator. As a partner, the role of evaluator is questionable.

Reader's Score: 5

Competitive Preference

1. Competitive Preference 5: Innovations for Improving Early Learning Outcomes

(0 or 1 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

The competitive preference was not addressed by the applicant.

Reader's Score: 0

**2. Competitive Preference 6: Innovations That Support College Access and Success
(0 or 1 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

Sufficient evidence was not provided regarding criteria a,b,and c.

Reader's Score: 0

3. Competitive Preference 7: Innovations To Address the Unique Learning Needs of Students With Disabilities and Limited English Proficient Students (0 or 1 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

The applicant has not provided sufficient information to demonstrate that it meets the requirements of this priority

Reader's Score: 0

4. Competitive Preference 8: Innovations That Serve Schools in Rural LEAs (0, 1, or 2 Points)

We give competitive preference to applications for projects that would implement innovative practices, strategies, or programs that are designed to focus on the unique challenges of high-need students in schools within a rural LEA (as defined in this notice) and address the particular challenges faced by students in these schools. To meet this priority, applications must include practices, strategies, or programs that are designed to improve student achievement or student growth, close achievement gaps, decrease dropout rates, increase high school graduation rates, or improve teacher and principal effectiveness in one or more rural LEAs.

Strengths

PLTW is designed to address the needs of rural middle and high school students.

Weaknesses

Reader's Score: 1

Status: Submitted

Last Updated: 07/02/2010 9:25 AM

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Status: Submitted
Last Updated: 07/06/2010 11:57 AM

Technical Review Coversheet

Applicant: Project Lead The Way, Inc. -- , - , (U396A100045)

Reader #4:

	POINTS POSSIBLE	POINTS SCORED
Summary Statement		
1. Summary Statement	N/A	N/A
Selection Criteria		
1. A. Need for the Project and Quality of the Project Design (up to 15 Points)	15	_____
2. B. Strength of Research, Significance of Effect, and Magnitude of Effect (up to 20 Points)	20	8
3. C. Experience of the Eligible Applicant (up to 15 Points)	15	0
4. D. Quality of the Project Evaluation (up to 15 Points)	15	5
5. E. Strategy and Capacity to Bring to Scale (up to 15 Points)	15	_____
6. F. Sustainability (up to 10 Points)	10	_____
7. G. Quality of the Management Plan and Personnel (up to 10 Points)	10	_____
Competitive Preference		
1. Competitive Preference 5: Innovations for Improving Early Learning Outcomes (0 or 1 Point)	1	_____
2. Competitive Preference 6: Innovations That Support College Access and Success (0 or 1 Point)	1	_____
3. Competitive Preference 7: Innovations To Address	1	_____

the Unique Learning Needs of Students With Disabilities and Limited English Proficient Students (0 or 1 Point)

4. Competitive Preference 8: Innovations That Serve Schools in Rural LEAs (0, 1, or 2 Points)	2	_____
TOTAL	105	13

Technical Review Form

Scale Up 1: 84.396A

Reader #4:

Applicant: Project Lead The Way, Inc. -- , - , (U396A100045)

Summary Statement

1. Summary State

Selection Criteria

1. A. Need for the Project and Quality of the Project Design (up to 15 Points)

In determining the need for the project and quality of the design of the proposed project, the Secretary considers the following factors:

(1) The extent to which the proposed project represents an exceptional approach to the priorities the eligible applicant is seeking to meet (i.e., addresses a largely unmet need, particularly for high-need students, and is a practice, strategy, or program that has not already been widely adopted).

(2) 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,**
- (b) expected to result in achieving the goals, objectives, and outcomes of the proposed project.**

Strengths

Weaknesses

2. B. Strength of Research, Significance of Effect, and Magnitude of Effect (up to 20 Points)

The Secretary considers the strength of the existing research evidence, including the internal validity (strength of causal conclusions) and external validity (generalizability) of the effects reported in prior research, on whether the proposed project will improve student achievement or student growth, close achievement gaps, decrease dropout rates, increase high school graduation rates, or increase college enrollment and completion rates. Eligible applicants may also demonstrate success through an intermediate variable that is strongly correlated with improving these outcomes, such as teacher or principal effectiveness.

In determining the strength of the existing research evidence, the Secretary considers the following factors:

(1) The extent to which the eligible applicant demonstrates that there is strong evidence (as defined in the Notice Inviting Applications) that its implementation of the proposed practice, strategy, or program will have a statistically significant, substantial, and important effect on improving student achievement or student growth, closing achievement gaps, decreasing dropout rates, increasing high school graduation rates, or increasing college enrollment and completion rates.

(2) 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.

Strengths

The applicant provided five research studies described as quasi-experimental (QED) studies to support the effects of the Project Lead The Way (PLTW). The research evidence provided does support the program having an impact on the academic achievement of students as measured by various assessments and other academic measures. All of the studies reported were QED. There was not random assignment of students in any of the studies (page 17).

The Kingsbury study was conducted in 22 schools across 10 states which supports the generalizability of the study. There were 951 PLTW students studied and a virtual control group created with a ratio of 51:1 to the PLTW students. The students were matched on 7 relevant factors including race, gender, fall NWEA's measure of academic progress, initial ability, testing date, enrollment in schools within 5 percent of PLTW free and reduced meals population, and enrollment in schools with the same NCES urban/rural

designation. The study concluded that the PLTW students exceeded the virtual control group on average academic growth in science concepts and processes and mathematics. The researchers presented effect sizes of .35 and .21 for the two areas respectively. Similar differences (effect sizes .30 and .18) were found in academic achievement of the PLTW students over non-PLTW students in the same two areas respectively. The study was conducted over one year.

Another study by the Southern Region Education Board (SERB) compared PLTW and non-PLTW students drawn from a pool of 641 students that participated in the High Schools that Work (HSTW) assessment and used proportional quota sampling to create 2 control groups for comparison with PLTW students. Additional stratified random sampling was applied to establish matched samples of CT students, in an attempt to control for selection bias, gender, ethnicity and parental education. However, the sizes of the control groups or the PLTW group were not reported. This study found that a higher percentage of PLTW students met the STW readiness goals, experienced CT courses with more integration of academic knowledge and skills, were more likely to complete four years of math and three years of science, and experienced more engaging math instruction in reading, math and science than the control groups. These results were each statistically significant at the .05 level. No effect sizes were reported. The Heywood study evaluated the impact of the PLTW on middle school students in three urban middle schools with large Latino enrollments. The students had received three years of the PLTW curriculum. The study compared the students to a control group of non-PLTW students from other schools in the school district. The treatment group consisted of 942 students and the control group consisted of 688 students each. There were two levels of matching, one at the school level and then matching individual students on grade, gender, ethnicity, and FARMS eligibility. The students' scores on the Milwaukee Public Schools standardized test were the primary outcome measure, in addition to attendance, placements, and courses taken in ninth grade were studied. Results from an attitudinal survey completed by 521 students were also studied. This study found that the students' scores improved each year and at the end of the third year the achievement gap was eliminated. No statistical significance, effect size or statistical methods used were reported.

The Phelps study and the Galt Joint Union High School District studies both reported more positive results for PLTW students on achievement as compared to non-PLTW students. However the Galt study did not provide any description of how students were matched and it was only within the school itself and only for the Latino students. No statistical significance, methodology used to analyze the data or description of the school was provided. The number of students involved was not reported. Statistical

significance was reported for the Phelps's study. The studies represent middle and high school students, who would be the target population for replicating the study. In addition, urban, rural, and minority students were part of the studies as well and they represent the population and regions that replication would focus.

Weaknesses

Although the reported studies present positive findings regarding the PLTW students' performance in all of the studies presented, the studies do not provide sufficient information to indicate that they represent strong evidence. The major study conducted by NWEA was only conducted over one academic year and provides no technical or statistical information to document the validity of the NWEA instrument. The Galt study does not report the statistical level. The Heywood study does not report tests of significance yet reports total elimination of the achievement gap. The Phelps study has a small sample size (27), and the time period during which this study was completed is not clear. The Galt Joint High School District Study does not indicate the number of PLTW students whose data were compared to the entire school data. No significance test results were present on how much higher the PLTW students performed compared to other students. The creation of the virtual control group is not well described, including the data base which is the source of the control group. Without additional information about the data base and the selection methodology it is not possible to determine if the matching process addresses threats to internal and external validity.

Reader's Score: 8

3. C. Experience of the Eligible Applicant (up to 15 Points)

In determining the experience of the eligible applicant, the Secretary considers the following factors:

- (1) The past performance of the eligible applicant in implementing large, complex, and rapidly growing projects.**
- (2) The extent to which an eligible applicant provides information and data demonstrating that**
 - (a) In the case of an eligible applicant that is an LEA, the LEA has -**
 - (i) Significantly closed the achievement gaps between groups of students described in section 1111(b)(2) of the ESEA, or significantly increased student achievement for all groups of students described in such section; and**

(ii) Made significant improvements in other areas, such as graduation rates or increased recruitment and placement of high-quality teachers and principals, as demonstrated with meaningful data; or

(b) In the case of an eligible applicant that includes a nonprofit organization, the nonprofit organization has significantly improved student achievement, attainment, or retention through its record of work with an LEA or schools.

Strengths

Weaknesses

Reader's Score: 0

4. D. Quality of the Project Evaluation (up to 15 Points)

In determining the quality of the evaluation, the Secretary considers the following factors:

(1) The extent to which the methods of evaluation will include a well designed experimental study or, if a well-designed experimental study of the project is not possible, the extent to which the methods of evaluation will include a well-designed quasi-experimental study.

(2) The extent to which, for either an experimental study or a quasi-experimental study, the study will be conducted of the practice, strategy, or program as implemented at scale.

(3) 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.

(4) 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.

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

(6) The extent to which the proposed evaluation is rigorous, independent, and neither the program developer nor the project implementer will evaluate the impact of the project.

Strengths

The applicant states that they are proposing a QED that will use statistical analysis to answer research questions to focus on the quality of the program

as it scales up. The self-selection aspect of the program does not allow for an experimental study. The partner NWEA will develop data bases and other instruments for analysis. The results of the analysis will be sent to a third party for developing summative results. There appears to be sufficient resources for the evaluation although the amount allocated is combined in the budget with assessments.

Weaknesses

No real evaluation plan is proposed. There are no details on what analyses will be conducted. The evaluation plan is focused on assessment and data base development to increase the applicant's capacity for evaluation. However there is no discussion about determining reliability and validity of the proposed assessments. This reviewer has concerns about the independence of NWEA who seems to be more of a partner for data base and assessment development than an evaluator of the project. The combined budget allocation reinforces this concern. The results of analyses will be sent to a third party to generate findings, however there is no discussion of who that third party will be, therefore their experience cannot be assessed. Although the evaluation plan discusses conducting process evaluation, the plan is really about developing data bases and assessments and improving them. Based on the application, this reviewer does not believe the proposed evaluation will be totally independent or provide sufficient information to replicate the program.

Reader's Score: 5

5. E. Strategy and Capacity to Bring to Scale (up to 15 Points)

In determining the quality of the strategy and capacity to bring the proposed project to scale, the Secretary considers:

(1) The number of students proposed to be reached by the proposed project and the capacity of the eligible applicant and any other partners to reach the proposed number of students during the course of the grant period.

(2) 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 national, regional, or State level working directly, or through partners, either during or following the end of the grant period.

(3) The feasibility of the proposed project to be replicated successfully, if positive results are obtained, in a variety of settings and with a variety of student populations. Evidence of this ability includes the proposed project's demonstrated success in multiple settings and with different types of students, the availability of

resources and expertise required for implementing the project with fidelity, and the proposed project's evidence of relative ease of use or user satisfaction.

(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, 500,000, and 1,000,000 students.

(5) The mechanisms the eligible applicant will use to broadly disseminate information on its project so as to support replication.

Strengths

Weaknesses

6. F. Sustainability (up to 10 Points)

In determining the adequacy of resources for the proposed project, the Secretary considers the following factors:

(1) The extent to which the eligible applicant demonstrates that it has the resources to operate the project beyond the length of the Scale-up grant, including a multi-year financial and operating model and accompanying plan; the demonstrated commitment of any other partners; and evidence of broad support from stakeholders (e.g., State educational agencies, teachers' unions) critical to the project's long-term success.

(2) 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 Scale-Up grant.

Strengths

Weaknesses

7. G. Quality of the Management Plan and Personnel (up to 10 Points)

In determining the quality of the management plan and personnel for the proposed project, the Secretary considers:

(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 large, complex, and

rapidly growing projects.

(3) The qualifications, including relevant expertise and experience, of the project director and key personnel of the independent evaluator, especially in designing and conducting large-scale experimental and quasi-experimental studies of educational initiatives.

Strengths

Weaknesses

Competitive Preference

1. Competitive Preference 5: Innovations for Improving Early Learning Outcomes (0 or 1 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

2. Competitive Preference 6: Innovations That Support College Access and Success (0 or 1 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

3. Competitive Preference 7: Innovations To Address the Unique Learning Needs of Students With Disabilities and Limited English Proficient Students (0 or 1 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

4. Competitive Preference 8: Innovations That Serve Schools in Rural LEAs (0, 1, or 2 Points)

We give competitive preference to applications for projects that would implement innovative practices, strategies, or programs that are designed to focus on the unique challenges of high-need students in schools within a rural LEA (as defined in this notice) and address the particular challenges faced by students in these schools. To meet this priority, applications must include practices, strategies, or programs that are designed to improve student achievement or student growth, close achievement gaps, decrease dropout rates, increase high school graduation rates, or improve teacher and principal effectiveness in one or more rural LEAs.

Strengths

Weaknesses

Status: Submitted

Last Updated: 07/06/2010 11:57 AM

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Status: Submitted

Last Updated: 07/03/2010 6:11 PM

Technical Review Coversheet

Applicant: Project Lead The Way, Inc. -- , - , (U396A100045)

Reader #5:

	POINTS POSSIBLE	POINTS SCORED
Summary Statement		
1. Summary Statement	N/A	N/A
Selection Criteria		
1. A. Need for the Project and Quality of the Project Design (up to 15 Points)	15	15
2. B. Strength of Research, Significance of Effect, and Magnitude of Effect (up to 20 Points)	20	_____
3. C. Experience of the Eligible Applicant (up to 15 Points)	15	9
4. D. Quality of the Project Evaluation (up to 15 Points)	15	_____
5. E. Strategy and Capacity to Bring to Scale (up to 15 Points)	15	9
6. F. Sustainability (up to 10 Points)	10	8
7. G. Quality of the Management Plan and Personnel (up to 10 Points)	10	5
Competitive Preference		
1. Competitive Preference 5: Innovations for Improving Early Learning Outcomes (0 or 1 Point)	1	0
2. Competitive Preference 6: Innovations That Support College Access and Success (0 or 1 Point)	1	0
3. Competitive Preference 7: Innovations To Address	1	1

the Unique Learning Needs of Students With Disabilities and Limited English Proficient Students (0 or 1 Point)

4. Competitive Preference 8: Innovations That Serve Schools in Rural LEAs (0, 1, or 2 Points)	2	1
TOTAL	105	48

Technical Review Form

Scale Up 1: 84.396A

Reader #5:

Applicant: Project Lead The Way, Inc. -- , - , (U396A100045)

Summary Statement

1. Summary State

The proposal is designed to improve STEM education for high needs students in mathematics and science. The goals of the proposal are clear, focused around three specific goals that relate to improving achievement.

The organization's data regarding overall program success appears to lack detailed results. The number of students proposed to be reached is impressive. Finally, the capacity of the organization, in terms of financial and qualified personnel, needs further clarification.

Selection Criteria

1. A. Need for the Project and Quality of the Project Design (up to 15 Points)

In determining the need for the project and quality of the design of the proposed project, the Secretary considers the following factors:

(1) The extent to which the proposed project represents an exceptional approach to the priorities the eligible applicant is seeking to meet (i.e., addresses a largely unmet need, particularly for high-need students, and is a practice, strategy, or program

that has not already been widely adopted).

(2) 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,

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

Strengths

The project presented appears to represent an exceptional approach to STEM education across the nation, specifically assisting in addressing the needs of high-need students in the areas of math and science achievement. Numerous examples were provided of the focus on improving achievement and reducing the achievement gap while preparing students for college readiness, including;

* A NWEA study concluded Project Lead the Way has successfully recruited minority groups to study STEM disciplines, citing a Latino middle school student study and the increase in student proficiency in reading, science and math.

* A similar high school study found a reduction in the achievement gap and increased student achievement for Hispanic/Latino students in a variety of high school subjects.

The goals of the proposal are very clear. Three specific goals are presented relating to the achievement gap, preparing students for college and increased American competitiveness. These goals are followed by two objectives and asset of outcomes to measure these goals. The goals, objectives and outcomes are aligned with the priorities of the proposal, and the outcomes of the proposal clearly reflect a commitment and expectation of achieving the goals as outlined.

Weaknesses

Reader's Score: 15

2. B. Strength of Research, Significance of Effect, and Magnitude of Effect (up to 20 Points)

The Secretary considers the strength of the existing research evidence, including the internal validity (strength of causal conclusions) and external validity (generalizability) of the effects reported in prior research, on whether the proposed project will improve student achievement or student growth, close achievement gaps, decrease dropout rates, increase high school graduation rates, or increase college enrollment and completion rates. Eligible applicants may also demonstrate

success through an intermediate variable that is strongly correlated with improving these outcomes, such as teacher or principal effectiveness.

In determining the strength of the existing research evidence, the Secretary considers the following factors:

(1) The extent to which the eligible applicant demonstrates that there is strong evidence (as defined in the Notice Inviting Applications) that its implementation of the proposed practice, strategy, or program will have a statistically significant, substantial, and important effect on improving student achievement or student growth, closing achievement gaps, decreasing dropout rates, increasing high school graduation rates, or increasing college enrollment and completion rates.

(2) 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.

Strengths

Weaknesses

3. C. Experience of the Eligible Applicant (up to 15 Points)

In determining the experience of the eligible applicant, the Secretary considers the following factors:

(1) The past performance of the eligible applicant in implementing large, complex, and rapidly growing projects.

(2) The extent to which an eligible applicant provides information and data demonstrating that

(a) In the case of an eligible applicant that is an LEA, the LEA has -

(i) Significantly closed the achievement gaps between groups of students described in section 1111(b)(2) of the ESEA, or significantly increased student achievement for all groups of students described in such section; and

(ii) Made significant improvements in other areas, such as graduation rates or increased recruitment and placement of high-quality teachers and principals, as demonstrated with meaningful data; or

(b) In the case of an eligible applicant that includes a nonprofit organization, the nonprofit organization has significantly improved student achievement, attainment,

or retention through its record of work with an LEA or schools.

Strengths

The past performance of the eligible applicant in implementing large, complex and rapidly growing projects appears to be stellar, as evidenced by;

- * Growth from 12 schools in 1996 to serving over 350,000 students at 3400 sites in all 50 states and DC.
- * Partnering with national programs, such as the International Baccalaureate program.
- * Serving as the leading provider of STEM curricula for schools through its numerous partners and strategies.

There is evidence cited about the applicant's ability to close the achievement gap. The data cited, involving two specific schools, demonstrated the ability to reduce achievement gaps.

Weaknesses

For an organization that now reaches over 350,000 students in all 50 states and DC, the data provided for the overall program's success lacks a national result. In addition, little if any data are presented on significant improvements related to graduation rate, placement of highly qualified teachers/principals or other areas consistent with this criteria.

Reader's Score: 9

4. D. Quality of the Project Evaluation (up to 15 Points)

In determining the quality of the evaluation, the Secretary considers the following factors:

- (1) The extent to which the methods of evaluation will include a well designed experimental study or, if a well-designed experimental study of the project is not possible, the extent to which the methods of evaluation will include a well-designed quasi-experimental study.**
- (2) The extent to which, for either an experimental study or a quasi-experimental study, the study will be conducted of the practice, strategy, or program as implemented at scale.**
- (3) 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.**

(4) 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.

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

(6) The extent to which the proposed evaluation is rigorous, independent, and neither the program developer nor the project implementer will evaluate the impact of the project.

Strengths

Weaknesses

5. E. Strategy and Capacity to Bring to Scale (up to 15 Points)

In determining the quality of the strategy and capacity to bring the proposed project to scale, the Secretary considers:

(1) The number of students proposed to be reached by the proposed project and the capacity of the eligible applicant and any other partners to reach the proposed number of students during the course of the grant period.

(2) 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 national, regional, or State level working directly, or through partners, either during or following the end of the grant period.

(3) The feasibility of the proposed project to be replicated successfully, if positive results are obtained, in a variety of settings and with a variety of student populations. Evidence of this ability includes the proposed project's demonstrated success in multiple settings and with different types of students, the availability of resources and expertise required for implementing the project with fidelity, and the proposed project's evidence of relative ease of use or user satisfaction.

(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, 500,000, and 1,000,000 students.

(5) The mechanisms the eligible applicant will use to broadly disseminate information on its project so as to support replication.

Strengths

The focus on pre-engineering is a real plus. This as a strategy is a real strength of the proposal. The scale-up plan was very strong, especially related to the capacity of the eligible applicant to reach large numbers of students. This plan has a set of dates, milestones and responsibilities to support the scale-up and management plan. The plan includes \$15 million in matching funds to support scale-up across the nation.

Weaknesses

The cost factors make significant assumptions that appear to not be validated by any data. The proposal assumes the cost at the local level will not be an issue, even though there is limited discussion of this factor. Other costs, such as teacher training and support for teachers is not addressed sufficiently to draw clear conclusions about the assumptions made about future expansion.

The replication needs further development as it is poorly defined with limited information presented in this section of the proposal.

The capacity of the organization in some areas (as mentioned in strengths) appears acceptable. However, two areas, financial and qualified personnel, need further review. A point made in the proposal states with significant growth, personnel and financial support is not always in place.

Reader's Score: 9

6. F. Sustainability (up to 10 Points)

In determining the adequacy of resources for the proposed project, the Secretary considers the following factors:

(1) The extent to which the eligible applicant demonstrates that it has the resources to operate the project beyond the length of the Scale-up grant, including a multi-year financial and operating model and accompanying plan; the demonstrated commitment of any other partners; and evidence of broad support from stakeholders (e.g., State educational agencies, teachers' unions) critical to the project's long-term success.

(2) 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 Scale-Up grant.

Strengths

The proposal appears to have the potential to operate beyond the grant cycle, as evidenced by the letters of support from states where projects are either in operation or are in the planning stages. The letters of support from 24% of the states is very impressive and reflects strong support for the project. This foundational level of commitment, combined with support from other foundation and business partners, provides promising support for long-term implementation success.

Weaknesses

Even though there appears to be support from states and other partners, the proposal is not clear about where funding will be found for the non-profit organization implementing this effort. The applicant describes the current organization as one that has grown immensely with minimal philanthropic support on a sustainable basis. It is not clear how the organization raises the funding to maintain a viable organization to meet large scale efforts after the grant funding ends.

Reader's Score: 8

7. G. Quality of the Management Plan and Personnel (up to 10 Points)

In determining the quality of the management plan and personnel for the proposed project, the Secretary considers:

- (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 large, complex, and rapidly growing projects.**
- (3) The qualifications, including relevant expertise and experience, of the project director and key personnel of the independent evaluator, especially in designing and conducting large-scale experimental and quasi-experimental studies of educational initiatives.**

Strengths

The proposal is a very positive attempt to meet the critical needs associated with improving math and science education in this country. While the management plan has major concerns, the commitment and the qualification of the key leaders of this STEM initiative are very promising.

Weaknesses

The management plan, in terms of clearly defined responsibilities, timelines and milestones, is inadequate, as evidenced by the following;

- * The plan presented on pages e46 and e47. Listed are dates for each milestone and a generic individual responsible.
- * The milestones present are actually as set of activities that have little information and little depth.
- * There are no tasks provided related to sustainability and scalability of the project.

No information is provided regarding the qualifications of the director and the five key personnel discussed in the proposal, as these people will be hired if the grant is funded. The grant lists other key personnel as the CEO and other staff to be involved in the project. What is not clear is who of these people will have direct and key roles for the project, nor whether the five additional people to be hired will be the key personnel.

The independent evaluator, NWEA, appears to be a solid, well respected organization on the national level, as evidenced by the historical nature of the work done in the past. The experience in developing large-scale and quasi-experimental studies is of question, as NWEA has its strength based on assessment.

Reader's Score: 5

Competitive Preference

1. Competitive Preference 5: Innovations for Improving Early Learning Outcomes (0 or 1 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

The priority was not a targeted competitive preference of the applicant.

Weaknesses

Reader's Score: 0

2. Competitive Preference 6: Innovations That Support College Access and Success (0 or 1 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 discussion of the use of trained counselors and others is a promising and much needed strategy to address student preparedness and expectations related to college.

Weaknesses

The overall proposal did not fully meet the requirements of competitive preference, especially as related to helping students understand issues of college affordability and financial aid.

Reader's Score: 0

3. Competitive Preference 7: Innovations To Address the Unique Learning Needs of Students With Disabilities and Limited English Proficient Students (0 or 1 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

The strength of this proposal is the emphasis on LEP students, in terms of focusing on student achievement and overall expectations for these students. The competitive priority is fully met.

Weaknesses

Reader's Score: 1

4. Competitive Preference 8: Innovations That Serve Schools in Rural LEAs (0, 1, or 2 Points)

We give competitive preference to applications for projects that would implement innovative practices, strategies, or programs that are designed to focus on the unique challenges of high-need students in schools within a rural LEA (as defined in this notice) and address the particular challenges faced by students in these schools. To meet this priority, applications must include practices, strategies, or programs that are designed to improve student achievement or student growth, close achievement gaps, decrease dropout rates, increase high school graduation rates, or improve teacher and principal effectiveness in one or more rural LEAs.

Strengths

The proposal clearly provides strategies and past performance related to the needs of rural students, especially in the areas of training and faculty development in the schools. The requirements of this competitive priority are partially met.

Weaknesses

The depth and breadth of the rural school criteria needs to be fully explained. The overall past focus has been primarily in urban settings, and the grant proposal moving forward is not clear as to what percentage of schools would be rural in nature.

Reader's Score: 1

Status: Submitted

Last Updated: 07/03/2010 6:11 PM