

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

Status: Submitted

Last Updated: 08/14/2014 10:56 PM

## Technical Review Coversheet

**Applicant:** AZ Board of Regents for Arizona State University (U336S140080)

**Reader #1:** \*\*\*\*\*

	Points Possible	Points Scored
<b>Questions</b>		
<b>Selection Criteria</b>		
<b>Significance</b>		
1. Significance	15	15
<b>Quality of Project Design</b>		
1. Project Design	45	45
<b>Quality of the Management Plan</b>		
1. Management Plan	20	20
<b>Quality of the Project Evaluation</b>		
1. Project Evaluation	20	20
<b>Priority Questions</b>		
<b>Competitive Preference Priority 1</b>		
<b>Promoting STEM Education</b>		
1. CPP 1	5	5
<b>Competitive Preference Priority 2</b>		
<b>Implementing Academic Standards</b>		
1. CPP 2	2	
<b>Total</b>	<b>107</b>	<b>105</b>

# Technical Review Form

Panel #2 - 2014 TQP Grant Review - 2: 84.336S

Reader #1: \*\*\*\*\*

Applicant: AZ Board of Regents for Arizona State University (U336S140080)

## Questions

### Selection Criteria - Significance

1. 1) The Secretary considers the significance of the proposed project.
  - 2) In determining the significance of the proposed project, the Secretary considers the following factors:
    - i) The extent to which the proposed project is likely to build local capacity to provide, improve, or expand services that address the needs of the target population.
    - ii) The likelihood that the proposed project will result in system change or improvement.
    - iii) The extent to which the proposed project will prepare personnel for fields in which shortages have been demonstrated.

### Strengths:

(i) The potential contributions of this project are strongly stated, which will address the need to improve educational outcomes for ELLs in Arizona, including methods in math, science, language and literacy development. The project focuses on: traditional discipline-specific learning, integrate evidence-based practices across STEM, intensive ELLs camp and activities with coaching, using technologies for learning, and offering online community resources, lessons, and collaboration opportunities. These practices will provide, improve and expand services that are needed for the targeted ELL population. (pgs. 19, 21)

(ii) The integration of ITeach ELLs, a preparation project, is designed to consistently have teacher educators meet the needs of the students through new and innovative ways to implement lessons that support English Language and literacy skills. The creation of a meaningful teacher preparation program through a redesign of professional coursework and implementation of a full year residency for teacher certification will have a national impact. Existing partnerships will allow the building of local capacity through the shift of thinking and practices of preservice teachers, inservice teachers, and university faculty based on transforming of teaching and learning opportunities for ELLS. The curriculum reform, the teacher candidate's residency experience, and the substantial impact of district partners will result in local and state system change for teaching, assessment and learning. (pgs. 23-25).

(iii) The project plans to close the academic achievement gaps that exist with ELLS because of weaknesses in English literacy, math and science content areas and other academic services. The plan will address shortage of teachers prepared to educate ELLs through the preparation of ALL teachers to educate the population. The proposed project includes approaches towards eliminating teachers who elect BLE/ESL endorsements, but rather include the focus on teaching ELL without a content context and to prepare ALL teachers to deliver math and science instruction, teach academic language development and literacy skills, and to integrate learning, knowledge and skills across content areas. The integration of employing qualified teachers who understand how to teach content while promoting English language attainment along with academic language development and literacy skills is expected to address the shortage of qualified personnel. (pgs. 25-27)

**Weaknesses:**

No weaknesses noted

**Reader's Score:** 15

**Selection Criteria - Quality of Project Design**

1. 1) The Secretary considers the quality of the design of the proposed project.

2) In determining the quality of the design of the proposed project, the Secretary considers the extent to which the proposed project consists of a comprehensive plan that includes a description of:

i) The extent to which the proposed project is supported by strong theory (as defined in this notice).

ii) The extent to which the training or professional development services to be provided by the proposed project are of sufficient quality, intensity, and duration to lead to improvements in practice among the recipients of those services.

iii) The extent to which the proposed activities constitute a coherent, sustained program of training in the field.

iv) The extent to which the services to be provided by the proposed project involve the collaboration of appropriate partners for maximizing the effectiveness of project services.

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

**Note:** In order to address this criterion, applicants are encouraged to develop logic models to demonstrate their project's theory of action. Applicants should connect available evidence of past history of successful outcomes to their logic models. Applicants may use resources such as the Pacific Education Laboratory's Education Logic Model Application ([www.relpacific.mcrel.org/PERR.html](http://www.relpacific.mcrel.org/PERR.html)) or the Northeast and Islands REL Skill Builder Workshops ([www.relnei.org/events/skill-builder-archive.html](http://www.relnei.org/events/skill-builder-archive.html)) to help design their logic models. In addressing this criterion, applicants are also encouraged to connect the project design to the intended impact of the project, including an explanation of how the project will affect the preparation, placement, retention, induction, and professional development of teachers, and ultimately student achievement. Finally, applicants are encouraged to discuss the role and commitment of each partner and how the IHE and LEA(s) plan to sustain their partnership beyond the life of the grant.

**Strengths:**

(i) The proposed project is aligned with a strong Logic Theory where the learner participates in a community of practice where learning in contextualized practices. The approach of the theory is non-traditional where professors are the primary transmitters of knowledge, students as receivers and learning is accessed through recall of transmitted knowledge. (pgs. 28-30)

(ii) The applicant describes a strong design for teacher preparation reform and innovation. These innovations are designed to transform teacher education through faculty capacity that will lead to better outcomes. The plan outlines the outcomes that seeks to change the culture (standard practice, strategies) of teacher preparation, focus on reforms and enhancements of math and science methods courses, promoted development of academic language and literacy skills for ELLs, integrated literacy and assessment courses, initiated processes for reforming and enhancing the curriculum and programs, focus on the use of PBLs, and establish principles for classroom enhanced signature assignments. The evidenced-based assessments and data-driven decision-making is expected to improve differentiated instruction and utilize tools for effective measurement of learning theory, practices and curricula contents used to meet the changing

needs of the Arizona schools. (pgs. 32-33)

(iii)The plan outlines in details the approaches for developing faculty knowledge of ELL practices and PBL design; implementing knowledge into math and science courses; and scaling up all sections after review and refinement. The applicant explains training components of the math and science course which includes teacher candidates working with ELL and PBL coaches to develop content, practices, and access to language and literacy skills, as well as how teacher candidates will practice to develop, implement and evaluate, using data driven approaches and integrate authentic learning content of their clinical experience. (pgs. 3-35)

(iv)The proposed project has the partners will collaborate to review reforms enhancements annually, examine student's data for assessments, engage in professional development of mentor teachers, and are invited to engage in professional learning opportunities alongside graduates. With the assistance of ELL and PBL coaches, along with other stakeholder viewpoints and partnerships, each will assist the project staff in refining outcomes across courses and programs. (pgs. 35-37)

(v)The plan appears to have substantial resources that are available to support the proposed project and appears to be a platform to exchange data and ideas between the university, district partners, faculty, and teacher candidates. The platform house a number of resources and opportunities for collaboration that is expected to be available and further developed beyond the length of the grant. The applicant states that ASU is committed to transforming teacher preparation with the PLL providing additional support for graduate and practicing teachers. The plan contends that there are adequate resources for a multi-year financial and operating model which is described in the plan and will be managed in a timely manner and within budget. (appendix; pages. 51-52)

**Weaknesses:**

No weaknesses noted

**Reader's Score:** 45

**Selection Criteria - Quality of the Management Plan**

**1. 1) The Secretary considers the quality of the management plan for the proposed project.**

**2) In determining the quality of the management plan for the proposed project, the Secretary considers the following factors:**

**i) 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.**

**ii) The qualifications, including relevant training and experience, of key project personnel.**

**iii) The extent to which performance feedback and continuous improvement are integral to the design of the proposed project.**

**Note: In order to address this criterion, applicants are encouraged to include in the application narrative a clear, well thought-out implementation plan that includes annual timelines, key project milestones, and a schedule of activities with sufficient time for developing an adequate implementation plan, as well as a description and qualifications of the personnel who would be responsible for each activity and the level of effort each activity entails. Applicants may also describe how the partnering organizations will communicate and coordinate in order to achieve project goals.**

**Strengths:**

(i)The project plan includes detailed goals, objectives and outcomes, including benchmarks, timelines, and defined responsibility of components that are intended to offer ongoing teacher training, coaching and mentoring. (pgs. 52-54)

(ii)The project personnel consist of a group of specialized professionals with diverse qualifications that includes a range of experiences that will contribute to making the project work for teacher training students. Their training and experiences are adequate and relevant for the success of this project, which includes day to day management, monitoring of completing goals, dissemination activities and closing out procedure. As outlined on their resumes, qualifications of the key personnel also includes working with faculty and grant staff to infuse evidence practices for ELLs, guiding the activities and project in science content, working with multistate projects that focused on assessing academic needs and services and effective instructional curriculum contents, expertise in mathematics educations with specific emphasis on technology and iSTEM, and experiences in coordinating, teaching, and facilitating school partnerships. The personnel are defined as masters of learning and instruction, which will be contributing factors to the goal of improving the educational experiences, cultural awareness, and social improvement for the project participants. (pgs. 56-58)

(iii)The plan outlines the collection of data to supply feedback on measurement of performances of project activities, strategies and curriculum content presentations. The feedback is collected from project staff and teacher training participants. There are components in the plan that ensures that delivery will produce adequate and continuous improvements which are assessed for program changes, as needed. (pg. 60)

**Weaknesses:**

No weaknesses noted

**Reader's Score: 20**

**Selection Criteria - Quality of the Project Evaluation**

**1. 1) The Secretary considers the quality of the evaluation to be conducted of the proposed project.**

**2) In determining the quality of the evaluation, the Secretary considers:**

**i) The extent to which the methods of evaluation provide valid and reliable performance data on relevant outcomes.**

**Note: In response to this selection factor, applicants are encouraged to include data on student learning.**

**ii) The extent to which the methods of evaluation are thorough, feasible, and appropriate to the goals, objectives, and outcomes of the proposed project.**

**iii) The extent to which the methods of evaluation will provide performance feedback and permit periodic assessment of progress toward achieving intended outcomes.**

**Note: In addressing this criterion, applicants are encouraged to include a plan for how the project s evaluation will address the TQP Grant Program performance measures established by the Department under the Government Performance and Results Act of 1993 (GPRA), as well as the measures established in section 204(a) of the HEA. (The specific performance measures established for the overall TQP Grant Program are discussed under Performance Measures in section VI of this notice.) Further, applicants are encouraged to describe how the applicant s evaluation plan will be designed to collect both output data and outcome data, including benchmarks, to monitor progress. Finally, each applicant is encouraged to select an independent, objective evaluator who has experience in evaluating educational programs and who will play an active role in the design and implementation of the project s evaluation.**

**Strengths:**

(i)The project evaluation process is intended to assess each project goal, the program activities, outcomes and the attainment of the program objectives. Their means for evaluation are outlined and will produce formative and summative results needed to measure performances to ensure that the project stays on track toward achieving expected outcomes.

(ii)The applicant states that to ensure the use of a rigorous evaluation design, data will be collected on an ongoing basis that allows for formative evaluation to inform on continuous program improvements and to show commitments for the proposed program model. The plan states that each component will be evaluated to determine adequate progress and provide feedbacks which are means to evaluate the objectives and outcomes of the project. In the evaluation are plans to assess program goals, objectives and outcomes in a systematic way on a regular, predetermined schedule. (pgs. 60-61)

(iii)There are details in the plan for collecting data from faculty, program staff and district partners in terms of quality, quantity, and social validity. The plan states that feedback from the participants and staff is vital for the development and implementation of the proposed project and outcomes will be used on an ongoing basis to measure progress and determine strategies for improvements. There will be an external evaluator who works closely with project staff and the PIs to ensure that program components and activities are delivered as proposed, feedback loops will be used on a regular (monthly) basis, implementation of the program will be monitored, and challenges will be addressed as they occur and program elements will be modified as necessary to meet the grant proposal outcomes. (pgs. 62-67)

**Weaknesses:**

No weaknesses noted

**Reader's Score: 20**

**Priority Questions****Competitive Preference Priority 1 - Promoting STEM Education****1. Projects that are designed to address one or both of the following priority areas:**

**a) Increasing the opportunities for high-quality preparation of, or professional development for, teachers or other educators of STEM subjects.**

**b) Increasing the number of individuals from groups traditionally underrepresented in STEM, including minorities, individuals with disabilities, and women, who are teachers or educators of STEM subjects and have increased opportunities for high-quality preparation or professional development.**

**Note: Applicants that respond to Competitive Preference Priority 1 and Absolute Priority 1 are still required to implement the required reforms within the whole teacher preparation program, as reflected in sections (a) and (b) of Absolute Priority 1.**

**In responding to this competitive preference priority, applicants are encouraged to include the following elements in their proposed projects:**

**1) Institutional collaboration to ensure that students in a college of education who intend to teach STEM courses have access to courses that build appropriate content knowledge. Such students should have access to course sequencing that is equal to the course sequencing for other STEM majors outside the college of education.**

**2) Emphasis on hands-on and inquiry-based STEM experiences for prospective teachers, including dedicated research or laboratory experiences, STEM discipline-specific pedagogical instruction, and explicit instruction in the interdisciplinary connections between learning sciences and STEM instruction; and**

**3) Early and multiple field-based instructional experiences for prospective teachers that are structured to provide exposure to a variety of teaching and learning environments, and that are coordinated and aligned with the teacher preparation curriculum.**

**Strengths:**

The plan indicates that through STEM instructions, there will be meaningful, integrated and incorporated effective strategies for developing STEM knowledge and English language and literacy skills. It is expected that teach candidates will contribute to a number of factors that lead to ELLs academic and language development. The plan includes the use of a complete model for meeting the unique learning needs of ELLs across curricular areas of STEM, language, literacy and assessment. There will be tools integrating scientifically-validated researched strategies related to the teaching and learning of ELL students, including assessments, data-driven decision making, and improving differentiated instructions. The goal to change the culture of teacher preparation, including standard practice and strategies for ELLs, focuses on enhancements of math and science methods courses, academic language and literacy skills, is expected to lead to better outcomes across content areas for all students.

**Weaknesses:**

No weaknesses noted

**Reader's Score: 5**

**Competitive Preference Priority 2 - Implementing Academic Standards**

**1. Projects that are designed to support the implementation of internationally benchmarked, college- and career-ready academic standards held in common by multiple States and to improve instruction and learning, including projects in the following priority areas:**

**a) The development or implementation of professional development or preparation programs aligned with those standards.**

**b) Strategies that translate the standards into classroom practice.**

**Strengths:**

**Weaknesses:**

**Reader's Score:**

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**Status:** Submitted  
**Last Updated:** 08/14/2014 10:56 PM

Status: Submitted

Last Updated: 08/19/2014 09:18 PM

## Technical Review Coversheet

**Applicant:** AZ Board of Regents for Arizona State University (U336S140080)

**Reader #2:** \*\*\*\*\*

	Points Possible	Points Scored
<b>Questions</b>		
<b>Selection Criteria</b>		
<b>Significance</b>		
1. Significance	15	14
<b>Quality of Project Design</b>		
1. Project Design	45	41
<b>Quality of the Management Plan</b>		
1. Management Plan	20	18
<b>Quality of the Project Evaluation</b>		
1. Project Evaluation	20	20
<b>Priority Questions</b>		
<b>Competitive Preference Priority 1</b>		
<b>Promoting STEM Education</b>		
1. CPP 1	5	3
<b>Competitive Preference Priority 2</b>		
<b>Implementing Academic Standards</b>		
1. CPP 2	2	
<b>Total</b>	<b>107</b>	<b>96</b>

# Technical Review Form

Panel #2 - 2014 TQP Grant Review - 2: 84.336S

Reader #2: \*\*\*\*\*

Applicant: AZ Board of Regents for Arizona State University (U336S140080)

## Questions

### Selection Criteria - Significance

1. 1) The Secretary considers the significance of the proposed project.
- 2) In determining the significance of the proposed project, the Secretary considers the following factors:
  - i) The extent to which the proposed project is likely to build local capacity to provide, improve, or expand services that address the needs of the target population.
  - ii) The likelihood that the proposed project will result in system change or improvement.
  - iii) The extent to which the proposed project will prepare personnel for fields in which shortages have been demonstrated.

### Strengths:

Arizona State provided strong support for the need to build capacity for preparing teachers in the state to effectively teach English learners, given substantial growth among English language learners in recent years, ELLs low graduation rate, and students' late access to the general curriculum. (pg. 19-21).

It was clear that growth among ELLs in Arizona challenges institutions of higher education to aid in developing educational programs that address ELL teacher shortages and their readiness to effectively meet the diverse needs of ELLs. (p. 19-21; 26)

### Weaknesses:

The Significance section of the grant application dedicated focused attention to revealing that ELLs are "removed from content classes for four hours a day" when they do not demonstrate expected levels of proficiency. This was attributed to a policy that restricts ELLs access to the general curriculum. The four goals introduced in this area did not address the gap in access to curriculum, which limits the iTeach ELL project's reach in terms of helping to address this issue. (pgs. 20-21)

Reader's Score: 14

### Selection Criteria - Quality of Project Design

- 1) The Secretary considers the quality of the design of the proposed project.
- 2) In determining the quality of the design of the proposed project, the Secretary considers the extent to which the proposed project consists of a comprehensive plan that includes a description of:
  - i) The extent to which the proposed project is supported by strong theory (as defined in this notice).
  - ii) The extent to which the training or professional development services to be provided by the proposed project are of sufficient quality, intensity, and duration to lead to improvements in practice among the recipients of those services.

iii) The extent to which the proposed activities constitute a coherent, sustained program of training in the field.

iv) The extent to which the services to be provided by the proposed project involve the collaboration of appropriate partners for maximizing the effectiveness of project services.

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

**Note:** In order to address this criterion, applicants are encouraged to develop logic models to demonstrate their project's theory of action. Applicants should connect available evidence of past history of successful outcomes to their logic models. Applicants may use resources such as the Pacific Education Laboratory's Education Logic Model Application ([www.relpacific.mcrel.org/PERR.html](http://www.relpacific.mcrel.org/PERR.html)) or the Northeast and Islands REL Skill Builder Workshops ([www.relnei.org/events/skill-builder-archive.html](http://www.relnei.org/events/skill-builder-archive.html)) to help design their logic models. In addressing this criterion, applicants are also encouraged to connect the project design to the intended impact of the project, including an explanation of how the project will affect the preparation, placement, retention, induction, and professional development of teachers, and ultimately student achievement. Finally, applicants are encouraged to discuss the role and commitment of each partner and how the IHE and LEA(s) plan to sustain their partnership beyond the life of the grant.

#### **Strengths:**

Situated learning theory, used as a lens for this project, becomes tangible in classrooms supported by project-based learning that allow students to associate meaning to concepts being taught (pg. 28-29) This supports math and science pedagogy as teachers must create process orientated, hands-on, and lab based learning experiences.

It is evident that the needs of ELLs were considered when selecting project-based learning pedagogy as a professional development approach to engaging pre-service teachers in meaningful and relevant learning experiences. Due to many of the students accessing the curriculum late and with language needs, this strategy assists in giving them more tangible access to the curriculum.

Faculty modeling of the project-based learning pedagogy increases the likelihood that teacher candidates will apply this teaching skill to their own classrooms (pg. 24).

Restructuring the MLFTC's traditional model of depending on credit-bearing courses as an effort to give students early access to classrooms through the use of field experience is a promising practice that supports the programs emphasis on situated learning (p. 28)

The iTeach ELL project identified plans to increase collaboration among faculty who have formally taught courses in isolation. Considerable steps will be taken to end this practice to create a new integrated program that focuses on the needs of the students (pg. 34).

A variety of stakeholders and resources, such as district partnerships, mentors, faculty, and online learning systems provides evidence that the iTeach ELL's project can be successfully implemented. (pgs. 34-36).

#### **Weaknesses:**

Project plans include activities such as instituting an iTeach ELL's Camp and PD and advance access for virtual learning opportunities and resource retrieval; however, insufficient information was provided on how the university will ensure that teachers shared knowledge gained from these resources in their school districts or transferred knowledge and skills they learned into their classrooms (pg. 51)

### Selection Criteria - Quality of the Management Plan

1. 1) The Secretary considers the quality of the management plan for the proposed project.

2) In determining the quality of the management plan for the proposed project, the Secretary considers the following factors:

i) 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.

ii) The qualifications, including relevant training and experience, of key project personnel.

iii) The extent to which performance feedback and continuous improvement are integral to the design of the proposed project.

**Note:** In order to address this criterion, applicants are encouraged to include in the application narrative a clear, well thought-out implementation plan that includes annual timelines, key project milestones, and a schedule of activities with sufficient time for developing an adequate implementation plan, as well as a description and qualifications of the personnel who would be responsible for each activity and the level of effort each activity entails. Applicants may also describe how the partnering organizations will communicate and coordinate in order to achieve project goals.

#### Strengths:

MLFTC has developed an “end-to-end” approach to ensuring that program activities are executed and that projects are completed on time. This approach will be facilitated by staff working in a designated department and charged with supporting program activities. (pg. 53)

A well-rounded cadre of professionals with expertise aligned with the major themes expressed in the goals of this grant have been assembled to administer the project. (pg. 55-61)

#### Weaknesses:

The grant alluded to the fact that a formative feedback loop would be developed without sharing sample examples of what this process would look like or with specifics on key personnel and district partners who will be involved in performance feedback (pg. 61).

### Selection Criteria - Quality of the Project Evaluation

1. 1) The Secretary considers the quality of the evaluation to be conducted of the proposed project.

2) In determining the quality of the evaluation, the Secretary considers:

i) The extent to which the methods of evaluation provide valid and reliable performance data on relevant outcomes.

**Note:** In response to this selection factor, applicants are encouraged to include data on student learning.

ii) The extent to which the methods of evaluation are thorough, feasible, and appropriate to the goals, objectives, and outcomes of the proposed project.

iii) The extent to which the methods of evaluation will provide performance feedback and permit

periodic assessment of progress toward achieving intended outcomes.

**Note:** In addressing this criterion, applicants are encouraged to include a plan for how the project's evaluation will address the TQP Grant Program performance measures established by the Department under the Government Performance and Results Act of 1993 (GPRA), as well as the measures established in section 204(a) of the HEA. (The specific performance measures established for the overall TQP Grant Program are discussed under Performance Measures in section VI of this notice.) Further, applicants are encouraged to describe how the applicant's evaluation plan will be designed to collect both output data and outcome data, including benchmarks, to monitor progress. Finally, each applicant is encouraged to select an independent, objective evaluator who has experience in evaluating educational programs and who will play an active role in the design and implementation of the project's evaluation.

**Strengths:**

iTeach ELLs evaluation methods are specifically aligned to each of the project goals, with the identification of valid and reliable performance data (pgs. 62-64)

A clear plan to integrate methodologies that are effective for improving the knowledge and skills levels of our pre-service teachers was included in the evaluation plan. (pgs. 62, 64)

A broad group of stakeholders, including faculty and district partners, will be afforded an opportunity provide performance feedback on the project. Plans to create a sustained, monthly feedback loop can potentially strength efforts to ensure continuous improvement.

**Weaknesses:**

N/A

**Reader's Score:** 20

**Priority Questions**

**Competitive Preference Priority 1 - Promoting STEM Education**

**1. Projects that are designed to address one or both of the following priority areas:**

**a) Increasing the opportunities for high-quality preparation of, or professional development for, teachers or other educators of STEM subjects.**

**b) Increasing the number of individuals from groups traditionally underrepresented in STEM, including minorities, individuals with disabilities, and women, who are teachers or educators of STEM subjects and have increased opportunities for high-quality preparation or professional development.**

**Note:** Applicants that respond to Competitive Preference Priority 1 and Absolute Priority 1 are still required to implement the required reforms within the whole teacher preparation program, as reflected in sections (a) and (b) of Absolute Priority 1.

**In responding to this competitive preference priority, applicants are encouraged to include the following elements in their proposed projects:**

**1) Institutional collaboration to ensure that students in a college of education who intend to teach STEM courses have access to courses that build appropriate content knowledge. Such students should have access to course sequencing that is equal to the course sequencing for other STEM majors outside the college of education.**

**2) Emphasis on hands-on and inquiry-based STEM experiences for prospective teachers, including dedicated research or laboratory experiences, STEM discipline-specific pedagogical instruction, and explicit instruction in the interdisciplinary connections between learning sciences and STEM instruction;**

and

**3) Early and multiple field-based instructional experiences for prospective teachers that are structured to provide exposure to a variety of teaching and learning environments, and that are coordinated and aligned with the teacher preparation curriculum.**

**Strengths:**

Plans to increase elementary students' knowledge and skills in mathematics and science while teaching language and literary skills necessary to improve ELLs achievement is a very comprehensive and efficient approach that holds potential for being extended to other universities serving communities with high populations of English learners.

**Weaknesses:**

The goal of the iTeach ELLs project is designed to engage teacher candidates in courses over time that build STEM knowledge (pg 13); however, a cohesive model or visual representation on how this will be benchmarked or achieved throughout the duration of the grant and sustained thereafter was not disclosed.

**Reader's Score: 3**

**Competitive Preference Priority 2 - Implementing Academic Standards**

**1. Projects that are designed to support the implementation of internationally benchmarked, college- and career-ready academic standards held in common by multiple States and to improve instruction and learning, including projects in the following priority areas:**

**a) The development or implementation of professional development or preparation programs aligned with those standards.**

**b) Strategies that translate the standards into classroom practice.**

**Strengths:**

**Weaknesses:**

**Reader's Score:**

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**Status:** Submitted  
**Last Updated:** 08/19/2014 09:18 PM

Status: Submitted

Last Updated: 08/15/2014 03:03 PM

## Technical Review Coversheet

**Applicant:** AZ Board of Regents for Arizona State University (U336S140080)

**Reader #3:** \*\*\*\*\*

	Points Possible	Points Scored
<b>Questions</b>		
<b>Selection Criteria</b>		
<b>Significance</b>		
1. Significance	15	13
<b>Quality of Project Design</b>		
1. Project Design	45	45
<b>Quality of the Management Plan</b>		
1. Management Plan	20	20
<b>Quality of the Project Evaluation</b>		
1. Project Evaluation	20	20
<b>Priority Questions</b>		
<b>Competitive Preference Priority 1</b>		
<b>Promoting STEM Education</b>		
1. CPP 1	5	5
<b>Competitive Preference Priority 2</b>		
<b>Implementing Academic Standards</b>		
1. CPP 2	2	
<b>Total</b>	<b>107</b>	<b>103</b>

# Technical Review Form

Panel #2 - 2014 TQP Grant Review - 2: 84.336S

Reader #3: \*\*\*\*\*

Applicant: AZ Board of Regents for Arizona State University (U336S140080)

## Questions

### Selection Criteria - Significance

1. 1) The Secretary considers the significance of the proposed project.
  - 2) In determining the significance of the proposed project, the Secretary considers the following factors:
    - i) The extent to which the proposed project is likely to build local capacity to provide, improve, or expand services that address the needs of the target population.
    - ii) The likelihood that the proposed project will result in system change or improvement.
    - iii) The extent to which the proposed project will prepare personnel for fields in which shortages have been demonstrated.

### Strengths:

With regard to building local capacity, the proposal focuses on building and institutionalizing the applicant's capacity to deliver preservice curricula that strengthen their ability to teach STEM content in ways that develop ELL students' language, academic language and literacy skills

With regard to generating system change, the applicant notes it has established relationships with 20 districts who are designated as high need districtwide. They anticipate graduating 800 teachers from their PreK-8 preparation programs per year and anticipate generating "experience and outcome data" for 2,000 "iTeach ELL" graduates by the end of the five year grant.

With regard to preparing personnel for critical shortage fields, the applicant proposes not to prepare educators for critical shortage credentials but instead to prepare candidates in early childhood and elementary education to develop skills – how to engage ELL students, help them master challenging STEM content, and engage them in project based learning – that are themselves in critical under-supply. The proposal makes the significant, research-supported point that PBL might be especially well-suited to meeting the needs of ELL students in content areas because it "offers opportunities for ELLs to be involved in long-term and meaningful learning, and it also provides a rich context for development of both basic and higher level skills in language and literacy" (p. 5).

As the applicant notes, rather than preparing candidates to teach ELL students in such critical shortage credential areas as ESOL education, they are seeking to have a substantially wider impact by preparing the much larger numbers of PreK-8 educators. They propose to also have a greater (not just wider) impact, by preparing educators who can structure effective learning opportunities for ELL students throughout the school day, rather than during specific blocks of time.

### Weaknesses:

The project does not address preparing candidates to teach in state or district-specified critical shortage credential areas (though this is largely offset by the compelling logic that deeper and more widespread benefits for high needs ELL students is likely to be achieved through its transformation of its PreK-8 preparation programs.)

## Selection Criteria - Quality of Project Design

### 1. 1) The Secretary considers the quality of the design of the proposed project.

2) In determining the quality of the design of the proposed project, the Secretary considers the extent to which the proposed project consists of a comprehensive plan that includes a description of:

i) The extent to which the proposed project is supported by strong theory (as defined in this notice).

ii) The extent to which the training or professional development services to be provided by the proposed project are of sufficient quality, intensity, and duration to lead to improvements in practice among the recipients of those services.

iii) The extent to which the proposed activities constitute a coherent, sustained program of training in the field.

iv) The extent to which the services to be provided by the proposed project involve the collaboration of appropriate partners for maximizing the effectiveness of project services.

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

**Note:** In order to address this criterion, applicants are encouraged to develop logic models to demonstrate their project's theory of action. Applicants should connect available evidence of past history of successful outcomes to their logic models. Applicants may use resources such as the Pacific Education Laboratory's Education Logic Model Application ([www.relpacific.mcrel.org/PERR.html](http://www.relpacific.mcrel.org/PERR.html)) or the Northeast and Island's REL Skill Builder Workshops ([www.relnei.org/events/skill-builder-archive.html](http://www.relnei.org/events/skill-builder-archive.html)) to help design their logic models. In addressing this criterion, applicants are also encouraged to connect the project design to the intended impact of the project, including an explanation of how the project will affect the preparation, placement, retention, induction, and professional development of teachers, and ultimately student achievement. Finally, applicants are encouraged to discuss the role and commitment of each partner and how the IHE and LEA(s) plan to sustain their partnership beyond the life of the grant.

#### **Strengths:**

With regard to the extent to which the proposed project is supported by strong theory, the proposal begins with research on the extensive need for the project (narrative pp. 1-4). This literature review, addressed further in the project design narrative (pp. 10-12,) provides a nuanced view of need for the project and its approach to that need – e.g., “lessons also need to include opportunities for use of language to learn, also known as academic language” (p. 4) – thus “teacher educators need to think in new and innovative ways about how to build knowledge and skills for preservice teachers so that they can implement lessons that support language acquisition \*and\* development of content knowledge” \*(p. 5).

The educator development design is of sufficient duration and intensity to likely yield the intended project outcomes, as the explicit goals and objectives of the project are to transform the PreK-8 program curriculum and to suffuse it with new emphases on ELL instruction, PBL strategies, and STEM content and pedagogy.

With regard to the extent to which the activities represent a coherent, sustained program of training, the project's logic model (narrative p. 13) and narrative (pp. 19-20) present a comprehensive and coherent overview of the project, with inputs, activities, implementation timelines, and short- and long-term outcomes and impacts. The action plans (pp. 15-32) are presented in thorough, thoughtful detail, aligning project goals with objectives, activities, timeframes, and role responsibilities. The applicant cites research on effective professional development approaches most likely to foster

implementation with fidelity (p 16), then lays out in clear detail the steps by which it will iteratively engage faculty in learning about and applying evidence-based ELL, PBL and STEM content pedagogy practices in their methods courses, in ways that are thoughtfully sequenced and manageable.

With regard to the extent to which the services involve collaboration of appropriate partners for maximizing the project's effectiveness, the project plan begins (p. 15) with plans to engage the applicant's faculty in "program enhancement teams" (pp. 16-17). The plan also calls for working closely – in explicitly described ways – with their district partners. The plan also calls for development, piloting and revision of "virtual learning modules" (p. 18) aligned to each of the project's four goals. The project will draw on and contribute to the applicant's school of education's "Professional Learning Library".

With regard to the extent to which the applicant demonstrates it has support resources to operate the project beyond the grant period (narrative pp. 34-35), the applicant emphasizes its abiding institutional commitment to maintain and continually strengthen the Professional learning Library resources generated by the project.

**Weaknesses:**

None identified.

**Reader's Score: 45**

**Selection Criteria - Quality of the Management Plan**

**1. 1) The Secretary considers the quality of the management plan for the proposed project.**

**2) In determining the quality of the management plan for the proposed project, the Secretary considers the following factors:**

**i) 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.**

**ii) The qualifications, including relevant training and experience, of key project personnel.**

**iii) The extent to which performance feedback and continuous improvement are integral to the design of the proposed project.**

**Note: In order to address this criterion, applicants are encouraged to include in the application narrative a clear, well thought-out implementation plan that includes annual timelines, key project milestones, and a schedule of activities with sufficient time for developing an adequate implementation plan, as well as a description and qualifications of the personnel who would be responsible for each activity and the level of effort each activity entails. Applicants may also describe how the partnering organizations will communicate and coordinate in order to achieve project goals.**

**Strengths:**

The management plan is thorough and meticulously aligned with the equally thorough project design's plan of aligned goals, objectives, activities, role responsibilities, timeframes, and logic model's outcomes and impacts.

The narrative provides details concerning the time commitments of key project personnel and their experience, expertise and training (pp. 36-43). The time commitments of these key staff are commensurate with the responsibilities to which they each have been assigned in the project plan.

With regard to the extent to which performance feedback and continuous improvement are integral to the project, as outlined in the evaluation narrative (pp. 44-50) process and outcome data will be collected on each of the project's activities, enabling formative evaluative feedback to the management team not only annually but also monthly (p. 50).

Appropriately, even though he will function in an external evaluation capacity, the applicant describes the lead external evaluator as an integral member of the project management team, reflecting their commitment to tap formative evaluation data at least monthly.

**Weaknesses:**

None identified.

**Reader's Score: 20**

**Selection Criteria - Quality of the Project Evaluation**

1. 1) The Secretary considers the quality of the evaluation to be conducted of the proposed project.

2) In determining the quality of the evaluation, the Secretary considers:

i) The extent to which the methods of evaluation provide valid and reliable performance data on relevant outcomes.

**Note:** In response to this selection factor, applicants are encouraged to include data on student learning.

ii) The extent to which the methods of evaluation are thorough, feasible, and appropriate to the goals, objectives, and outcomes of the proposed project.

iii) The extent to which the methods of evaluation will provide performance feedback and permit periodic assessment of progress toward achieving intended outcomes.

**Note:** In addressing this criterion, applicants are encouraged to include a plan for how the project s evaluation will address the TQP Grant Program performance measures established by the Department under the Government Performance and Results Act of 1993 (GPRA), as well as the measures established in section 204(a) of the HEA. (The specific performance measures established for the overall TQP Grant Program are discussed under Performance Measures in section VI of this notice.) Further, applicants are encouraged to describe how the applicant s evaluation plan will be designed to collect both output data and outcome data, including benchmarks, to monitor progress. Finally, each applicant is encouraged to select an independent, objective evaluator who has experience in evaluating educational programs and who will play an active role in the design and implementation of the project s evaluation.

**Strengths:**

With regard to the extent to which the methods of evaluation provide valid and reliable performance data on relevant outcomes, the evaluation plan calls for specific, detailed qualitative and quantitative indicators for formative and summative evaluation (pp. 44-54).

With regard to the extent to which the methods of evaluation are thorough, feasible, and appropriate to the goals, objectives, and outcomes of the proposed project, as noted with regard to the management plan, the evaluation plan is thorough and aligned in every detail with the project's goals, objectives, outcomes, timelines, role responsibilities, and outcome and impact indicators.

Appropriately, even though he will function in an external evaluation capacity, the applicant describes the lead external evaluator as an integral member of the project management team, reflecting their commitment to tap formative evaluation data at least monthly. The external evaluator's qualifications (p. 42) are commensurate with those needed for a project of this complexity and scale.

**Weaknesses:**

None identified.

**Reader's Score: 20**

**Priority Questions**

**Competitive Preference Priority 1 - Promoting STEM Education**

**1. Projects that are designed to address one or both of the following priority areas:**

**a) Increasing the opportunities for high-quality preparation of, or professional development for, teachers or other educators of STEM subjects.**

**b) Increasing the number of individuals from groups traditionally underrepresented in STEM, including minorities, individuals with disabilities, and women, who are teachers or educators of STEM subjects and have increased opportunities for high-quality preparation or professional development.**

**Note: Applicants that respond to Competitive Preference Priority 1 and Absolute Priority 1 are still required to implement the required reforms within the whole teacher preparation program, as reflected in sections (a) and (b) of Absolute Priority 1.**

**In responding to this competitive preference priority, applicants are encouraged to include the following elements in their proposed projects:**

**1) Institutional collaboration to ensure that students in a college of education who intend to teach STEM courses have access to courses that build appropriate content knowledge. Such students should have access to course sequencing that is equal to the course sequencing for other STEM majors outside the college of education.**

**2) Emphasis on hands-on and inquiry-based STEM experiences for prospective teachers, including dedicated research or laboratory experiences, STEM discipline-specific pedagogical instruction, and explicit instruction in the interdisciplinary connections between learning sciences and STEM instruction; and**

**3) Early and multiple field-based instructional experiences for prospective teachers that are structured to provide exposure to a variety of teaching and learning environments, and that are coordinated and aligned with the teacher preparation curriculum.**

**Strengths:**

The applicant proposes to prepare at least 2,000 candidates in PreK-8 education with significantly improved expertise in teaching STEM content using PBL instructional strategies and data-driven decision making for differentiated learning, for ELL students.

**Weaknesses:**

None identified.

**Reader's Score: 5**

**Competitive Preference Priority 2 - Implementing Academic Standards**

**1. Projects that are designed to support the implementation of internationally benchmarked, college- and career-ready academic standards held in common by multiple States and to improve instruction and learning, including projects in the following priority areas:**

a) The development or implementation of professional development or preparation programs aligned with those standards.

b) Strategies that translate the standards into classroom practice.

**Strengths:**

**Weaknesses:**

**Reader's Score:**

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