

Budget

Lake Local (049866) - Stark County - 2015 - Straight A Fund - Rev 0 - Straight A Fund - Application Number (150)

U.S.A.S. Fund #:

Plus/Minus Sheet ([opens new window](#))

Purpose Code	Object Code	Salaries 100	Retirement Fringe Benefits 200	Purchased Services 400	Supplies 500	Capital Outlay 600	Other 800	Total
Instruction		0.00	0.00	0.00	0.00	434,700.00	0.00	434,700.00
Support Services		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Governance/Admin		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Prof Development		252,554.00	53,443.00	24,000.00	27,400.00	0.00	0.00	357,397.00
Family/Community		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Safety		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Facilities		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Transportation		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		252,554.00	53,443.00	24,000.00	27,400.00	434,700.00	0.00	792,097.00
Adjusted Allocation								0.00
Remaining								-792,097.00

Application

Lake Local (049866) - Stark County - 2015 - Straight A Fund - Rev 0 - Straight A Fund - Application Number (150)

Please respond to the prompts or questions in the areas listed below in a narrative form.

A) APPLICANT INFORMATION - General Information

1. Project Title:

Instructional Innovation through Inquiry: Transforming Teaching and Learning, a Collaboration between the Lake Local School District {LLSD}

2. Executive summary: Please limit your responses to no more than three sentences.

The collaboration between the Lake Local School District and the University of Akron Global Polymer Academy intends to disrupt instruction approaches which tend to passively engage students and present situations to students promoting productive struggle. With productive struggle, students grapple with real world issues and are expected to generate solutions, developing persistence and resilience in pursuing and attaining the learning goal or understanding. In such scenarios, student engagement is maximized and students work collaboratively to solve real world problems. The present effort represents a partnership between the University of Akron Global Polymer Academy {APGA} and the Lake Local School District {LLSD} to systematically promote a Constructivist/Inquiry-Based Learning paradigm across all grade levels and content areas. The introduction of digital tools, promoting one-to-one computing, will be an integral part of this initiative allowing students the ability to access information and generate multi-media reports. During the initial year, approximately 60 teachers and 1800 students will be directly impacted. Subsequent years will witness the expansion of this approach to teaching and learning to all grade levels and content areas throughout the district.

This is an ultra-concise description of the overall project. It should not include anything other than a brief description of the project and the goals it hopes to achieve.

1800 3. Total Students Impacted:

This is the number of students that will be directly impacted by implementation of the project. This does not include students that may be impacted if the project is replicated or scaled up in the future.

4. Please indicate which of the following grade levels will be impacted:

- | | |
|--|--|
| <input type="checkbox"/> Pre-K Special Education | <input type="checkbox"/> Kindergarten |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
| <input type="checkbox"/> 3 | <input checked="" type="checkbox"/> 4 |
| <input checked="" type="checkbox"/> 5 | <input checked="" type="checkbox"/> 6 |
| <input checked="" type="checkbox"/> 7 | <input checked="" type="checkbox"/> 8 |
| <input checked="" type="checkbox"/> 9 | <input checked="" type="checkbox"/> 10 |
| <input checked="" type="checkbox"/> 11 | <input checked="" type="checkbox"/> 12 |

5. Lead applicant primary contact: - Provide the following information:

First Name, last Name of contact for lead applicant
John D. McAllister

Organizational name of lead applicant
Lake Local Schools

Address of lead applicant
436 King Church Avenue SW Uniontown Ohio 44685

Phone Number of lead applicant
330-877-9383

Email Address of lead applicant
mcallisterjohn@lakelocal.org

6. Are you submitting your application as a consortium? - Select one checkbox below

- Yes
 No

If you are applying as consortium, please list all consortium members by name on the "Consortium Member" page by clicking on the link below. If an educational service center is applying as the lead applicant for a consortium, the first consortium member entered must be a client district of the educational service center.

Add Consortium Members

7. Are you partnering with anyone to plan, implement, or evaluate your project? - Select one checkbox below

Yes

No

If you are partnering with anyone, please list all partners by name on the "Partnering Member" page by clicking on the link below.

Add Partnering Members

B) PROJECT DESCRIPTION - Overall description of project and alignment with goals

8. Describe the innovative project: - Provide the following information

The response should provide a clear and concise description of the project and its major components. Later questions will address specific outcomes and the measures of success.

The current state or problem to be solved; and

With the advent of the common core and Ohio's New Learning Standards, as well as the need for students to compete successfully in an information society, it is imperative we change the way we educate students. No longer can students be passive receptacles of information provided by teachers. Contrarily, students must be actively engaged as learners and problem solvers in a world where information is ubiquitous and communication skills are essential. College and career readiness standards require our students to work collaboratively; to be able to efficiently access, examine and interpret information; demonstrate an arsenal of communication/presentation skills; and realize the benefits achieved through productive struggle. The collaboration between the University of Akron Global Polymer Academy and Lake Local Schools intends to significantly alter teaching and learning, eventually leading to a constructivist/inquiry based learning paradigm. During training, teachers will learn about inquiry through hands-on, interactive experiences with explicit connections to classroom instruction. They will also be introduced to the 5E learning cycle model which focuses on Engagement, Exploration, Explanation, Elaboration, and Evaluation. Teachers will then have time to develop lesson plans, explore resources, and collaborate with their peers. Implementation efforts will be monitored by staff from Lake Local and the University of Akron and student performance will be examined following the implementation of inquiry-based lessons. To facilitate leveraging the training program and honing LLSD teaching expertise, AGPA will make available all training materials, lesson plans and instructional videos on an AGPA maintained web site. Thus most materials will be available to any interested party across the state and beyond.

The proposed innovation and how it relates to solving the problem or improving on the current state.

Our partnership is proposing an innovative model of instruction be implemented across our curriculum, featuring constructivism and inquiry-based learning. A constructivist perspective assumes students must be actively involved in their learning and concepts are not transmitted from teacher to student but constructed by the student. In the early 1960's, Robert Karplus and his colleagues proposed and used an instructional model based upon the work of Piaget. This model would eventually become known as the learning cycle. Numerous studies have shown that the learning cycle as of model of instruction is far superior to transmission models in which students are passive receivers of knowledge from their teacher. The learning cycle follows Bybee's {1997} five steps of Engagement, Exploration, Explanation, Elaboration, and Evaluation; A. Engagement The teacher poses the problem, pre-assesses the students, helps students make connections, and informs students about where they are heading. The purpose of engagement is to: -Focus students attention on the topic. -Pre-assess participants' prior knowledge. -Inform the students about the lesson's objective(s). -Remind students of what they already know that they will need to apply to learning the topic at hand. -Pose a problem for the students to explore in the next phase of the learning cycle. Evaluation of Engagement: Evaluation's role in engagement revolves around the pre-assessment. Find out what the students already know about the topic at hand. B. Exploration Students are at the center of the action as they collect data to solve the problem. The teacher makes sure the students collect and organize their data in order to solve the problem. Evaluation of Exploration: In this portion of the learning cycle the evaluation should primarily focus on process, i.e., on the students data collection, rather than the product of the students data collection. Teachers assess: -How well are the students collecting data? -Are they selecting the appropriate data? -How do students record the data? C. Explanation In this phase of the process, students use the data they have collected to solve the problem and report what they did and try to figure out the answer to the problem that was presented. The teacher introduces new vocabulary, phrases or sentences to label what the participants have presented. Evaluation of Explanation: Evaluation here focuses on the process the students are using -- how well can students use the information they've collected, plus what they already knew to come up with new ideas? D. Elaboration The teacher provides new information that extends what they have been learning in the earlier parts of the learning cycle. The teacher also poses problems that students solve by applying what they have learned. During this part of the lesson teachers should be planning their implementation of their enhanced content knowledge into lessons for their students. Evaluation of Elaboration: The evaluation that occurs during elaboration focuses on teacher plan for classroom implementation and/or their enhanced content knowledge. Inquiry-based learning is an approach to teaching that involves a process of exploring the natural world that leads to asking questions and making discoveries in the search of new understandings. Inquiry is a method of approaching problems that is used by professional scientists but is helpful to anyone who scientifically addresses matters encountered in everyday life. Inquiry is based on the formation of hypotheses and theories and on the collection of relevant evidence. There is no set order to the steps involved in inquiry, but children need to use logic to devise their research questions, analyze their data, and make predictions. When using the inquiry methods of investigation, children learn that authorities can be wrong and that any question is reasonable.

9. Which of the stated Straight A Fund goals does the proposal aim to achieve? - (Check all that apply)

Applicants should select any and all goals the proposal aims to achieve. The description of how the goals will be met should provide the reader with a clear understanding of what the project will look like when implemented, with a clear connection between the components of the project and the stated goals of the fund. If partnerships/consortia are part of the project, this section should describe briefly how the various entities will work together in the project. More detailed descriptions of the roles and activities will be addressed in Question 16.

Student achievement (Describe the specific changes in student achievement you anticipate as a result of this innovation (include grade levels, content areas as appropriate) in the box below.)

During the summer 2014 training session, we will target science and math teachers in grades 4 - 8. A summer 2015 training session will be provided for teachers of math and science from the high school. On grade levels and content areas where early adopters are positioned (those teachers that have participated in summer training), lessons will be designed to achieve learning outcomes featuring constructivism/inquiry based learning. Such teaching strategies are aligned with Ohio's New Learning Standards and the accompanying next generation of assessments. We expect representation by 30 math and science teachers during the summer 2014 training. Historically, we have developed and implemented a system of common assessments. We also maintain trend data from common assessments from previous years and the expectation is for our students of our trained teachers to demonstrate superior performance from previous years. We also anticipate our adopter students to perform at a higher level on all state and PARCC assessments and national assessment indicators (ACT, EXPLORE, AP Tests, etc.). Presently Lake Local is a very high achieving district, performing in the top 10% of all districts in the state on all key academic achievement indicators. We anticipate our performance to be among the top three percent at the end of the five year period. We will also continue to gather information about our high school graduates and expect this data to also trend in a positive direction once the change is fully implemented (key data points here are: percent of students requiring remedial courses in college, employment statistics, and college retention and graduation rates). The University of Akron will also commission a program evaluator who will be charged with qualifying the effectiveness of our initiative. The program evaluator will rely upon the works of Kirkpatrick (1994). Kirkpatrick indicated an essential component of professional development activities involves ongoing and systematic evaluation procedures. Kirkpatrick's (1994) evaluation framework provides four levels of evaluation for professional training programs. The four stages of evaluation are intended to measure: (1) reaction, (2) learning, (3) behavior and actions, and (4) results. This approach will be described in greater detail later in the proposal.

Spending reductions in the five-year fiscal forecast or positive performance on other approved fiscal measures (Describe the specific reductions you anticipate in terms of dollars and spending categories over a five-year period in the box below or the positive performance you will achieve on other approved fiscal measures. Other approved fiscal measures include a reduction in spending over a five-year period in the operating budget approved by your organization's executive board or its equivalent.)

Spending reductions realized through the implementation of this program will tend to be marginal and primarily realized through a reduction in our professional development budget during the summers of 2014 and 2015. A significant portion of professional development activity during these years will relate to the grant goals and result in a minor reduction in district professional development expenses, approximately \$25,000. The funds expended for technology purchase and maintenance will not alter our five year forecast significantly, as our technology expenditure/maintenance rate with or without the grant will remain constant as we advance to one-to-one computing in the district.

Utilization of a greater share of resources in the classroom (Describe specific resources (Personnel, Time, Course offerings, etc.) that will be enhanced in the classroom as a result of this innovation in the box below.)

Funds provided by the grant will result in a rapid acceleration toward our one-to-one computing initiative, essential for establishing a constructivist/inquiry-based learning and resulting in greater efficiency at the class level. Funds will also be used to provide intensive training for teachers which will result in greater efficiency for teaching and learning. Once teachers are trained, our district will implement a train-the-trainer model to train other teachers in this methodology. Our intent is to change our teaching and learning paradigm throughout the district in a relatively short period of time.

Implementing a shared services delivery model (Describe how your shared services delivery model will demonstrate increased efficiency and effectiveness, long-term sustainability, and scalability in the box below.)

The collaboration between the LLSD and the AGPA represents a partnership between a public school system and an institute of higher learning designed to enhance teaching and learning and ultimately provide students with the requisite college and career readiness skills to ensure student success in college and beyond. The partnership is a model and a living example of the P - 16 concept. More significantly, it provides a template and methodology for implementing this approach in other public school environments, The LLSD and AGPA are committed to provide training for others wishing to following a similar pathway.

10. Which of the following best describes the proposed project? - (Select one)

New - never before implemented

Existing: Never implemented in your community school or school district but proven successful in other educational environments

Mixed Concept: Incorporates new and existing elements

Established: Elevating or expanding an effective program that is already implemented in your district, school or consortia partnership

C) SUSTAINABILITY - Planning for ongoing funding of the project, cost breakdown

11. Financial Documentation: - All applicants must enter or upload the following supporting information. The information in these documents must correspond to your responses in questions 11-14.

* Enter a project budget in CCIP (by clicking the link below)

[Enter Budget](#)

* If applicable, upload the Consortium Budget Worksheet (by clicking the link below)

* Upload the Financial Impact Table (by clicking the link below)

* Upload the Supplemental Financial Reporting Metrics (by clicking the link below)

[Upload Documents](#)

For applicants without an ODE Report Card for 2012-2013, provide a brief narrative explanation of the impact of your grant project on per pupil expenditures or why this metric does not apply to your grant project instead of uploading the Supplemental Financial Reporting Metric.

The project budget is entered directly in CCIP. For consortia, this project budget must reflect the information provided by the applicant in the Consortium Budget Worksheet. Directions for the Financial Impact Table are located on the first tab. Applicants must submit one Financial Impact Table with each application. For consortium applications, each consortium member must add an additional tab on the Financial Impact Tables. Partners are not required to submit a Financial Impact Table.

Applicants with an "Ohio School Report Card" for the 2012-2013 school year must upload the Supplemental Financial Reporting Metrics to provide additional information about cost savings and sustainability. Directions for the Supplemental Financial Reporting Metrics are located on the first tab of the document. If your organization does not have an "Ohio School Report Card" for the 2012-2013 school year, please provide an explanation in the text box about how your grant project will impact expenditures per pupil or why expenditure per pupil data does not apply to your grant project.

Educational service center, county boards of developmental disabilities, and institutions of higher education seeking to achieve positive performance on other approved fiscal measures should submit the budget information approved by an executive board or its equivalent on the appropriate tabs of the Financial Impact Table. Educational service centers should use the "ESC" tab and county boards of developmental disabilities and institutions of higher education should use the "non-traditional" tab.

12. What is the total cost for implementing the innovative project?

Responses should provide rationale and evidence for each of the budget items and associated costs outlined in the project budget. In no case should the total projected expenses in the budget narrative exceed the total project costs in the budget grid.

797,143.00 State the total project cost.

* Provide a brief narrative explanation of the overall budget.

Expenses fall into the two major categories of Instruction: Capital Outlay and Professional Development. The Capital Outlay component is primarily for the purchase for LLSD of 20 laptop carts (\$2,095 ea.) each suitable for carrying 30 laptops (E531 13-311OM 2GB, 30x (\$519+\$119 for 3 year onsite maintenance=\$19,140) and a charging station. These laptops provide sufficient screen resolution, speed and screen size for students. The laptop carts are a means of providing digital learning equipment for science classes that is very flexible and consistent with the inquiry-based approach in which students are encouraged to seek for solutions themselves using various resources. LLSD has made substantial investments in recent years in digital tools and has the support staff and budget resources to maintain and/or replace the laptops appropriately over their expected useful lifetime of five years. UA AGPA requests \$10,000 in capital expense for the purchase of a high speed video camera for creating videos used both in teaching science concepts related to polymer science and for training in inquiry based teaching methods. Under professional development LLSD foresees expense for compensation for teachers for workshop participation (30 Teachers/12 days/6 hours per day/ \$30 per hour = \$64,800 in each of summer 2014 and summer 2015) and for participation in two half-day professional development sessions during the '14-'15 school year (30 Teachers/2 days/ 4 hours per day/\$30 per hour = \$7,200). STRS and Medicare contributions for this compensation total \$21,135. Supplies for LLSD for all consumables required to execute our new approach to teaching and learning will be \$5,000 and purchased services for food/refreshments during the workshops and professional development sessions will be \$12,000. Expenses for UA activities under professional development are for the preparation, execution, and follow up for the workshops, as well as for the evaluation of the project's efficacy and impact. In order to run three weeks (3x4 days) of workshop in summer 2014 and three weeks in summer 2015 with follow up during the school year, AGPA will incur salary and fringe benefit costs for eight individuals. A ninth individual will serve as evaluator. Personnel costs (salary) for the primary in-service provider total \$20,603. Those for content area specialists in polymers, math, and science come to \$43,252. The cost for the program evaluator is \$14,501. Two graphic designers will create videos for aiding training that will be posted online after each workshop, will maintain an online discussion board, and post and maintain the lesson plans and other materials resulting from the workshops and follow up professional development activities. Their salary cost will be \$20,387. Cost of the supervision from the director of AGPA will be \$8418 and for an administrative assistant \$8593. The total cost for salary for UA personnel will be \$115,754 with an additional \$32,308 for fringe benefits. Supply costs include \$8,500 in supplies for the workshops, \$2,700 for supplies and small (non-capital) items for video production and \$9,000 for 30 kits of resource materials (\$300 ea.) provided to the teachers in workshop I in summer 2014. Costs for local travel to LLSD (mileage) for follow up and professional development days by the polymer, math, and science content specialists are estimated at \$700. In order to best disseminate the results from this innovative project, an additional \$1,500 is foreseen for travel to present the results at a professional conference. Other administrative costs for UA (purchasing, facilities, janitorial, etc.) will be addressed with a flat fee of \$12,000. Thus total expenses for UA are \$192,462. Combining UA and LLSD costs results in a total expenditure of \$792,097.

13. Will there be any costs incurred as a result of maintaining and sustaining the project after June 30th of your grant year?

Sustainability costs include any ongoing spending related to the grant project after June 30th of your grant year. Examples of sustainability costs include annual professional development, equipment maintenance, and software license agreements. To every extent possible, rationale for the specific amounts given should be outlined. The costs outlined in the narrative section should be consistent and verified by the financial documentation submitted and explained in the Financial Impact Table. If the project does not have sustainability costs, applicants should explain why.

Yes - If yes, provide a narrative explanation of your sustainability costs as detailed in the Financial Impact Table in the box below.

No - If no, please explain why (i.e. maintenance plan included in purchase price of equipment) in the box below.

Costs associated with sustaining this initiative will be minimal and will be assumed through either the technology budget or professional development budget of the LLSD. Staff trained during the initial year of the grant will be used as trainers during subsequent years of implementation and will draw upon both their previous training and implementation experience. All teaching staff within the district are

required to complete professional development both in the summer and during the school year. These activities will be restricted to professional development aligned with constructivist/inquiry-based learning techniques. Technology purchased with the grant will be maintained by the district and the district intends to continue expenditure levels needed to ultimately provide one-to-one capacity for all students. Lesson plans, training modules and best teaching practices, including thematic units, developed before and during the project will be accessible by all teachers through the AGPS website. The LLSd and AGPA will continue collaborative efforts following the grant year to continue implementing/enhancing this teaching and learning approach. Both partners will assume costs associated through the continued partnership.

14. Will there be any expected savings as a result of implementing the project?

Yes

No

Applicants with sustainability costs in question 13 or seeking to achieve significant advancement in spending reductions in the five-year forecast must address this response. Expected savings should match the information provided by the applicant in the Financial Impact Table. All spending reductions must be verifiable, permanent, and credible. Applicants may only respond "No" if the project will not incur any increased costs as a result of maintaining and sustaining the project after June 30th of your grant year. The Governing Board will use the cost savings as a tiebreaker between applications with similar scores during its final selection process. Cost savings will be calculated as the amount of expected cost savings less sustainability costs relative to the project budget.

25,000.00 If yes, specify the amount of annual expected savings. If no, enter 0.

If yes, provide details on the expected savings (i.e. staff counts and salary/benefits, equipment to be purchased and cost, etc.). If no, please explain

The LLSd will realize a temporary and moderate reduction with our professional development budget during the grant year as these costs will be assumed through grant funds. Grant funds will also accelerate the acquisition of digital tools necessary for implementing a constructivist/inquiry-based learning environment. Going forward, we expect our professional development budget to show moderate decreases as we rely upon teachers initially trained through this initiative to train colleagues who haven't received training. This will occupy a significant amount of our professional development activity and in turn expenses will be reduced. Technology purchases and support will stay constant during our five year forecast, at the aggressive levels previously established to fulfill our need for placing digital tools in the hands of our students and teachers. AGPA does not anticipate cost savings through this partnership.

15. Provide a brief explanation of how the project is self-sustaining.

All Straight A Fund grant projects must be expenditure neutral. For applications with increased ongoing spending as documented in question 11-14, this spending must be offset by expected savings or reallocation of existing resources. These spending reductions must be verifiable, permanent, and credible. This information must match the information provided in your Financial Impact Table. Projected additional income may not be used to offset increased ongoing spending because additional income is not allowed by statute. Please consider inflationary costs like salaries and maintenance fees when considering whether increased ongoing spending has been offset for at least five years after June 30th of your grant year. For applications without increased ongoing spending as documented in questions 11-14, please demonstrate how you can sustain the project without incurring any increased ongoing costs.

For educational service centers and county boards of developmental disabilities that are members of a consortium, any increased ongoing spending at the educational service center or county board of developmental disabilities may also be offset with the verifiable, permanent, and credible spending reductions of other members of the consortium. This increased ongoing spending must be less than or equal to the sum of the spending reductions for the entire consortium.

Explain in detail how this project will sustain itself for at least five years after June 30th of your grant year.

During the initial year of the grant, around 25% of the LLSd teaching staff will be trained to implement constructivist/inquiry-based learning techniques in their classes. Throughout implementation, data will be collected to demonstrate the efficacy of inquiry-based learning and will serve as an impetus for expanding this approach to other teachers. During years two - through five, early adopters will be used to train remaining teachers according to a train-the-trainer model. Throughout the five year period and beyond, LLSd teachers will have complete access to the AGPA website and all the related resources (lesson plans, teacher training modules, simulations, best teaching practices and thematic units). The LLSd and AGPS will maintain their partnership during this time and beyond with any expenses required for consultative purposes being assumed by the district. It is anticipated these expenses be very moderate. LLSd will also continue funding toward achieving a one-to-one computing initiative.

D) IMPLEMENTATION - Timeline, scope of work and contingency planning

16. Please provide a brief description of the team or individuals responsible for the implementation of this project, including other consortium members and/or partners.

This response should include a list of qualifications for the applicant and others associated with the grant. If the application is for a consortium or a partnership, the lead should provide information on its ability to manage the grant in an effective and efficient manner. Include the partner/consortium members' qualifications, skills and experience with innovative project implementation and projects of similar scope.

Enter Implementation Team information by clicking the link below:

[Add Implementation Team](#)

For Questions 17-19 please describe each phase of your project, including its timeline, scope of work, and anticipated barriers to success.

A complete response to these questions will demonstrate specific awareness of the context in which the project will be implemented, the major barriers

that need to be overcome and the time it will take to implement the project with fidelity. A strong plan for implementing, communicating and coordinating the project should be outlined, including coordination and communication in and amongst members of the consortium or partnership (if applicable). It is recognized that specific action steps may not be included, but the outline of the major implementation steps should demonstrate a thoughtful plan for achieving the goals of the project. The time line should reflect significant and important milestones in an appropriate and reasonable time frame.

17. Planning - Activities prior to the grant implementation

* Date Range February 2014 to present

* List of scope of work (activities and/or events including project evaluation discussions, communication and coordination among entities).

Representatives from LLSD and AGPA established contact in early February 2014 and have maintained consistent communication since, including a face-to-face meeting to thoroughly review and discuss grant parameters. We arrived at a mutually agreeable format and left the meeting with both teams having action items to complete no later than March 7. One action item included a draft proposal submitted by Lake Local which served as the basis for a subsequent meeting April 3. During that meeting the scope and sequence was refined prior to submission to the ODE site. Approximately three weeks from the grant submission deadline, communication between Lake and Akron occurred on a daily basis.

* Anticipated barriers to successful completion of the planning phase

Presently we are on target and no major barriers are anticipated. The grant draft has been shared with all stakeholders and Lake and the AGPA are consistently communicating and refining the grant application.

18. Implementation - Process to achieve project goals

* Date Range June 2014 - June 30, 2015

* List of scope of work (activities and/or events, including deliverables, project milestones, interim measurements, communication, and coordination).

Upon approval notification we will solicit and identify summer training participants. The grant draft has been shared with teachers and administrators from Lake, as well as the AGPA staff. Summer training for teachers will be provided prior to the beginning of school during the months of July and August. Digital tools will be purchased and our tech team will distribute equipment to participating teachers in advance of the school year. The yearly meeting/professional development calendar will be developed, with training and progress monitoring designed for building-level cohorts. An evaluation entity from the University of Akron will be secured during the first month of the project and will be charged with evaluating program effectiveness along four categories, defined elsewhere in the proposal. Both short-cycle and long term/summative assessments will be used to quantify student learning. Communication between partners will be continuous with the Education Specialist from AGPA and the Director of Instruction from the LLSD serving as lead contacts for each organization.

* Anticipated barriers to successful completion of the implementation phase.

Presently, the major obstacle identified relates to the time lines associated with the grant application process, which was recently modified. With the grant submission and approval process being pushed back, this severely restricts our summer training window, an essential part of program deployment. Anticipating a late notification, teacher training will have to be implemented during a three-week window prior to the beginning of the school year. We anticipate this training to commence July 28 and end August 14. School begins for students August 19. We intend to overcome this barrier by proceeding under the assumption our proposal will be approved.

19. Summative Evaluation - Plans to analyze the results of the project

* Date Range June 2014 - June 2015

* List of scope of work (activities and/or events, including quantitative and qualitative benchmarks and other project milestones).

February 2014: AGPA and the LLSD agree to collaborate to develop and submit a Straight "A" Grant Proposal. April 2014: Submit Grant Proposal and share the grant narrative and budget with the Lake Teachers in anticipation of summer training June 2014: LLSD and AGPA will develop summer training modules July 28-August 14, 2014: The initial three-week training session for 30 math and science teachers from grades 4 - 8. Aug - May 2015: All teacher participants are expected to implement at least four cross-curricular thematic lessons during the school year. The Director of Instruction and Education Specialist will consult regularly and develop the content for two half-day Saturdays for reviewing/sharing/retraining and questions and answers. Class visitations during inquiry-based lessons will be implemented in the fall and spring with representatives from Lake and Akron. Aug - May 2015: Education specialist and graphic designers will develop additional lessons, simulations, professional development modules, and best teaching practices. All will be accessible through the AGPA website. Aug-May 2015: An objective evaluation consultant will be commissioned to evaluate program effectiveness. Performance indicators will include: student performance on common assessments for students compared to the performance of students during previous years. Student and teacher surveys will be administered and the results compared to similar surveys from previous years. Student performance on end of year state and national (ACT, EXPLORE, AP, etc.) tests will be analyzed. The number of lessons, simulations, professional development modules and the efficacy of the AGPA website will be assessed. Staff surveys related to training and program implementation will be conducted. All performance indicator data will be used to inform future expansion. June 2015: Second teacher cohort will be trained, math and science teachers from grade three and the high school.

* Anticipated barriers to successful completion of the summative evaluation phase.

We have identified lead and lag indicators to determine the efficacy of our initiative. It is possible our performance relative to these indicators initially might not demonstrate the predicted gains until teachers have more training/experience implementing new approaches to teaching and learning. We are confident this will be a temporary effect and achievement gains will be realized and sustained during the next five years and beyond.

20. Describe the expected changes to the instructional and/or organizational practices in your institution.

The response should illustrate the critical instructional and/or organizational changes that will result from implementation of the grant and the impact of these changes. These changes can include permanent changes to current district processes, new processes that will be incorporated or the

removal of redundant or duplicative processes. The response may also outline the expected change in behaviors of individuals (changes to classroom practice, collaboration across district boundaries, changes to a typical work day for specific staff members, etc.). The expected changes should be realistic and significant in moving the institution forward.

Please enter your response below:

Education research clearly indicates student learning is enhanced when students are actively engaged in learning and addressing real world issues versus an environment where students are passive recipients of information. A constructivist/inquiry-based learning perspective assumes students must be actively involved in their learning and concepts are not transmitted from teacher to student but constructed by the student. The present effort proposes fundamentally altering the manner in which teaching and learning occur through a constructivist/inquiry-based learning approach as outlined by Bybee's {1997} five steps of Engagement, Exploration, Explanation, Elaboration and Evaluation. Engagement involves posing the problem, pre-assessing students, assisting students to make connections and informing students about activity goals and objectives. Exploration requires students collect and organize data and information to solve the problem. Explanation requires students to use data and information they have collected to solve the problem and Elaboration requires students communicate their findings coherently using a variety of mediums. This is in stark contrast to traditional approaches where the teacher provides information and the student is a passive recipient, with assessments typically requiring students to re-generate the material presented. It is expected this approach to teaching and learning is consistent with Ohio's new learning standards and next generation of assessments and consequently students exposed to this type of learning environment will achieve far superior to students in typical learning environments. Ultimately our intent is to increase the likelihood for success for our students as they exit our doors.

E) SUBSTANTIAL IMPACT AND LASTING VALUE - Impact, evaluation and replication

The responses in this section are focused on the ability to design a method for evaluating the project's capacity for long-term sustainable results. Therefore, the questions focus on the method of defining the problem(s) the project hopes to solve and the measures that will determine if the problem (s) have been solved.

21. Describe the rationale, research or past success that supports the innovative project and its impact on student achievement, spending reduction in the five-year fiscal forecast or utilization of a greater share of resources in the classroom.

The response should provide a concise explanation of items which provide rationale that will support the probability of successfully achieving the goals of the project. Answers may differ based on the various levels of development that are possible. If the proposal is for a new, never before implemented project, the response should provide logical, coherent explanations of the anticipated results based on some past experience or rationale. For projects that have been implemented on a smaller scale or successfully in other organizations, the response should provide the quantifiable results of the other projects. If available, relevant research in support of this particular proposal should also be included.

Please enter your response below.

Inquiry-Based Learning (IBL) is not a recent or passing movement in education. IBL is based on a wide body of research and has a long track record of success. An inquiry-based approach was recommended by the National Science Foundation in their 1996 report of a year-long review of the state of undergraduate Science, Mathematics, Engineering and Technology (SME&T) education in the United States entitled Shaping the Future (NSF, 1996). In this report, the researchers stated that it is imperative that: All students have access to supportive, excellent education in science, mathematics, engineering, and technology, and all students learn these subjects by direct experience with the methods and processes of inquiry (NSF, 1996, p.6). Student performance is enhanced by elevated levels of student engagement. IBL enhances engagement and it is our expectation performance will improve. We have gathered student engagement data from our students during the past 7 years and the results are troubling. Over half of our students report they are not challenged by their current course work and find the majority of their courses uninteresting and traditional. We owe it to our students to promote a more healthy attitude about learning and provide students with the tools to succeed in an information society.

22. Describe the overall plan to evaluate the impact of the concept, strategy or approaches used in the project.

This plan should include the methodology for measuring all of the project outcomes. Applicants should make sure to outline quantitative approaches to assess progress and measure the overall impact of the project proposal. The response should provide a clear outline of the methods, process, timelines and data requirements for the final analysis of the project's progress, success or failure. The applicant should provide information on how the lessons learned from the project can and will be shared with other education providers in Ohio.

* Include the name and contact information of the person who will be responsible for conducting the evaluation and whether this will be an internal or external evaluation.

Dr. Xin Liang from the University of Akron will conduct an evaluation of the project along the following parameters: 1.Reaction: Measures how those who participate in professional development activities react to what has been presented. Participants need to have a positive reaction to a professional development activity if information is to be learned and behavior is to be changed. Data sources to document reaction : - Observation of training session; -Initial PD satisfaction Survey; and -Post PD satisfaction Survey. 2.Learning: Measures the extent that professional development activities have improved participants' knowledge, increased their skills, and changed their attitudes. Changes in instructional behavior and actions cannot take place without these learning objectives being accomplished. Data sources to document the participating educators' learning will include: -Duration and frequency of PD lessons; -Pre and Post Polymer content knowledge assessment, and -Pre and Post Inquiry-based learning assessment. 3. Behavior: Measures what takes place when the participant completes a professional development activity. It is important for instructors to have the opportunity to change their behavior. Data sources to document the participating educators' behavior will include: -Teacher observation score before the professional development participation in the spring semester -Teach classroom observation score after the PD session in the fall. 4.Results: Measures the final results that occurred because an instructor participated in professional development activities. Data sources to document the professional development results will include 1) student learning outcome measured by monthly student learning assessments administered by the Lake Local School District, and 2) student mathematics and science scores in the state standardized tests by comparing the student score in 2014 with 2015 Kirkpatrick, D. L. (1994)

* Include the method by which progress toward short- and long-term objectives will be measured. (This section should include the types of data to be

collected, the formative outputs and outcomes and the systems in place to track the project's progress).

Ultimately, the success of this effort will be determined by student performance. Student achievement data will be collected from both locally developed assessments and state assessments. We will compare the performance of students in the experimental group with the performance of students from previous years. We expect academic performance to continue to trend upwards on all performance indicators as teachers gather greater experience/training with this approach to learning. Our short term key performance measures include our locally developed common assessments. These are administered to all of our students on every grade level and in each content area. These results inform our teacher groups about student progress toward learning standards and also serve to inform instruction and assessment activity. Our long term key performance indicators presently include our district value-added rating, our district performance index and our district composite ACT score. We expect student performance on both short and long term measures to trend upward and continue to do so as we gain greater experience with a constructivist/IBL approach and as we expand our efforts to other grade levels and content areas.

* Include the method, process and/or procedure by which the project will modify or change the project plan if measured progress is insufficient to meet project objectives.

Should preliminary achievement information, survey data or information secured from the independent evaluation agency indicate results other than those predicted, teams from AGPA and the LLSD will meet to identify the reason(s). We will adjust subsequent training accordingly, but suggest that any initial judgments should be made with caution until our teachers accumulate sufficient experience to successfully execute this approach to teaching. We fully expect any results other than those predicted by our proposal will be temporary.

23. Describe the substantial value and lasting impact which the project hopes to achieve.

The response should provide specific quantifiable measures of the grant outcomes and how the project will lead to successful attainment of the project goals. Applicants should describe how the program or project will continue after the grant period has expired.

Please enter your response below.

We fully intend to change the paradigm for teaching and learning in our district as a result of this grant. No longer will students be passive participants with the learning process, but actively engaged, problem solvers able to access, interpret and apply information. We are convinced this approach will result in superior achievement, increased satisfaction for school by teachers and students, and most importantly our students will possess the essential college/career skills they will need to experience success when they exit our doors. Performance by students on our long term key performance indicators will partially validate the success of this project. Ultimately, the success of this project will be determined by the performance of our students post-high school. Lake collects data about our graduates for up to five years post graduation. Key measures include: the percent of students requiring remedial courses in college, employment information, and college retention/graduation rates. We anticipate data on these key measures to trend positively once this approach to teaching and learning has been fully implemented and continue to do so as teacher/student experience with IBL increases.

24. Describe the specific benchmarks, by goal as answered in question 9, which the project aims to achieve in five years. Include any other anticipated outcomes of the project that you hope to achieve that may not be easily benchmarked.

The applicant should provide details on the quantifiable measures of short- and long- term objectives that will be tracked and the source of benchmark comparative data points. Responses should include specified measurement periods and preliminary success points that will be used to validate successful implementation of the project. If a similar project has been successfully implemented in other districts or schools, identification of these comparable benchmarks should be included.

* Student Achievement

We expect our key academic performance indicators to all demonstrate gains from the first year of implementation into the foreseeable future. The LLSD has been among the highest achieving districts in the state over the past years, with a Performance Index and Composite ACT score in the top ten percent of all districts in the state. Our value-added scores have also been impressive. We expect our performance to increase even more with the implementation and expansion of our inquiry-based learning initiative. We anticipate our performance in these areas to be among the top 3% of all districts in the state within a five year period. Survey data will demonstrate increased satisfaction with teaching and learning by teachers and students. We have collected this information for the last five years and expect to demonstrate an immediate improvement in these ratings and to demonstrate increased satisfaction each year going forward. AGPA will build upon and make available their repertoire of lessons, simulations, professional development modules/programs and outreach programs to other schools.

* Spending Reduction in the five-year fiscal forecast

Spending reductions realized through the implementation of this program will tend to be marginal and primarily realized through a reduction in our professional development budget during the summers of 2014 and 2015. A significant portion of professional development activity during these years will relate to the grant goals and result in a minor reduction in professional development expenses, approximately \$25,000. The funds expended for technology will not alter our five year forecast significantly, as our technology expenditure rate with or without the grant will remain constant as we advance to one-to-one computing in the district.

* Utilization of a greater share of resources in the classroom

Our Straight A Grant will provide teachers with the time, tools, and training to implement an inquiry-based learning approach to teaching. By doing so, significant dollars will be leveraged for changing the manner in which we deliver instruction for our students and these leveraged dollars will exclusively be manifested in the classroom.

* Implementation of a shared services delivery model

The collaboration between the LLSD and the AGPA represents a partnership between a public school system and an institute of higher learning designed to enhance teaching and learning and ultimately provide students with the requisite college and career readiness skills to ensure student success in college and beyond. The partnership is a model and is a living example of the P - 16 concept. More significantly, it provides a template and methodology for implementing this approach in other public school environments. The LLSD and AGPA are committed to provide training for others wishing to following a similar pathway.

* Other Anticipated Outcomes

Survey data will demonstrate increased satisfaction with teaching and learning by teachers and students. We have collected this information

for the last five years and expect to demonstrate an immediate improvement in these ratings and to demonstrate increased satisfaction each year going forward. AGPA will build upon and make available their repertoire of lessons, simulations, professional development modules/programs and outreach programs to other schools.

25. Is this project able to be replicated in other districts in Ohio?

Yes

No

If the applicant selects "Yes" to the first part of the question, the response should provide an explanation of the time and effort it would take to implement the project in another district, as well as any plans to share lessons learned with other districts. To every extent possible, applicants should outline how this project can become part of a model so that other districts across the state can take advantage of the learnings from the proposed innovative project. If there is a plan to increase the scale and scope of the project within the district or consortium, it should be included here.

* Explain your response

The LLSD will invite other districts to observe their innovative approaches to teaching and learning. We would also make our staff available to train personnel from other districts to implement similar approaches to teaching and learning. AGPA and the LLSD intend to present during professional conferences with the intent of sharing best practices related to instruction and assessment. AGPA is committed to expand, update, promote and share their website with all schools which will serve as a tremendous impetus for adopting a constructivist/inquiry-based learning approach.

By virtue of applying for the Straight A Fund, all applicants agree to participate in the overall evaluation of the Straight A Fund for the duration of the evaluation time frame. The Governing Board of the Straight A Fund reserves the right to conduct an evaluation of the project and request additional information in the form of data, surveys, interviews, focus groups and other related data on behalf of the General Assembly, Governor and other interested parties for an overall evaluation of the Straight A Fund.

PROGRAM ASSURANCES: I agree, on behalf of this applicant, and any or all identified consortium members or partners, that all supporting documents contain information approved by a relevant executive board or its equivalent and to abide by all assurances outlined in the Straight A Assurances (available in the document library section of the CCIP).

I agree to the aforementioned.

Sections 

Consortium Contacts

No consortium contacts added yet. Please add a new consortium contact using the form below.

Partnerships

Lake Local (049866) - Stark County - 2015 - Straight A Fund - Rev 0 - Straight A Fund

Sections 

Partnerships

First Name	Last Name	Telephone Number	Email Address	Organization Name	IRN	Address	Delete Contact
Sharon	McWhorter, MA,CRA	330-972-8311	sm48@uakron.edu	University of Akron		Simmons Hall 109, , Akron, Oh, 443253909	

Implementation Team

Lake Local (049866) - Stark County - 2015 - Straight A Fund - Rev 0 - Straight A Fund

Sections

Implementation Team						
First Name	Last Name	Title	Responsibilities	Qualifications	Prior Relevant Experience	Delete Contact
Mark	Foster, PhD	Associate Dean and Director of APGA	Provides strategic direction of AGPA activities and the coordination of those activities with the research expertise of university faculty members with expertise in polymer science and polymer engineering	Prof. Mark D. Foster: Ph.D. Chemical Engineering, University of Minnesota, Postdoctoral Experience at the Max-Planck-Institute for Polymer Research in Mainz. 23.5 years as Assistant/Associate/Full Professor of Polymer Science at UA. Over 100 publications in polymer science. 8+ years of experience as Department Chair and Associate Dean, dealing with curriculum reform and program assessment. 10 years' experience as Assoc. Director and Director of AGPA, overseeing domestic science outreach and workforce development efforts. 5 years' experience as Chief Principal Investigator of an externally funded grant (> \$20M) for the establishment of a training institute in polymer technology in Saudi Arabia managing a team of 20 individuals responsible for training Saudi instructors in hands-on instruction in elastomer technology and science at UA and starting up and running the training institute in Saudi Arabia with > 30 training staff (all trained at UA) and 120 trainee enrollment.	AGPA currently provides teacher lesson plan training in a National Science Foundation funded Research Experience for Teachers (RET) and collaborates with Wright Patterson Air Force Base on an annual summer workshop for teachers. As the outreach unit of the College, AGPA has won and successfully executed the following previous grants: U.S. Department of Education, Fund for the Improvement of Education FY 2008-11, \$143,000. Ohio Board of Regents, Improving Teacher Quality Grant Award for Fiscal Year, 2007, \$60,728. Ohio Board of Regents, Improving Teacher Quality Grant Award for Fiscal Year, 2006, \$66,637. Ohio Board of Regents, Improving Teacher Quality Program Award for Fiscal Year 2005, \$74,850.	
John	McAllister	Director of Instruction, Lake Local Schools	The LLSD is the lead partner and those efforts will be led by McAllister. LLSD will also serve a fiscal agent.	John McAllister has been associated with the LLSD for over 20 years, all as an administrator. He has served the district as both an elementary and high school principal and has been the Director of Instruction the past seven years. The LLSD is annually one of the highest achieving districts in the state, and also excels in the arts and athletics.	As Director of Instruction, Mr. McAllister has extensive experience submitting and supervising a variety of grants. Lake Local recently received and successfully executed a Race to the Top grant under his supervision. Mr. McAllister is also responsible for supervising all state and federal grants for Lake Local.	
Abraham	Joy, PhD	Professor of Polymer Science; University of Akron	Polymer science specialist - .Dr. Joy will teach polymer content to teachers in the workshop and review inquiry based lesson plans for scientific accuracy..	Ph. D. Organic Chemistry, Tulane University 2000; Postdoctoral Fellow; Georgia Institute of Technology 2000 - 2005; NIH Ruth Kirschstein T32 Postdoctoral Fellow at Rutgers University / Univ. of Pennsylvania 2006 - 2008; Research Associate, New Jersey Center for Biomaterials, Rutgers University 2008 - 2010; Assistant Professor of Polymer Science, The University of Akron 2010 - present	Mentor: Science Olympiad, Akron, (2010 - 2012) Grades 2-6 -Seminar: STEM Middle School, Akron (Nov 2010) - Organizer and Mentor: Research Experience for Harker High School students at Univ. Akron, College of Polymer Science and Polymer Engineering, Summers 2013, 2014 - Mentor: St. Vincent - St. Mary High School; underprivileged students -Mentor: St. Vincent - St. Mary High School	

					Teacher - Student Research Experience (2010 - present) - Mentor: NSF REU program at The University of Akron (2010 summer)	
Lynne	Pachnowski, PhD	Professor Curricular & Instructional Studies; College of Education - University of Akron	Math Specialist - Dr. Pachnowski will assist Dr. Holliday and the team in determining the mathematical applications in the workshop activities, correlate them to Common Core Math Standards, and help integrate the mathematics in the lesson experiences. Besides analyzing data, applications can be made to the mathematics areas of algebra (through function modeling), geometry, and number sense and operations. She will also coach the teachers in implementing the Common Core Mathematical Practices, encouraging students to problem-solve, reason, and articulate.	Dr. Pachnowski earned her Ph.D. in Education Administration from Boston College and has a B.A. and M.Ed. in Math Education. She has 21 years of experience as a math teacher educator and researcher at the University of Akron. She has co-instructed with Dr. Linda Saliga (Mathematics) on several in-service teacher professional development opportunities. She also serves as Project Director of the UA Woodrow Wilson Teaching Fellowship program, a non-traditional STEM teacher preparation program.	Dr. Pachnowski has been a principal investigator or co-investigator on over 2 million dollars in grant projects, most involving in-service teacher professional development. She has co-facilitated teacher workshops including "Making Mathematics Work" with Dr. Linda Saliga (math) funded by the Ohio Department of Education (\$201,819) and "ABLE GED Math Initiative" with Dr. Saliga, a workshop for GED Math instructors, funded by the Ohio Board of Regents ITQ (\$63,262). Drs. Pachnowski and Saliga will be co-instructing the teacher workshop, "Common Core Fractions" in June of 2014 (\$69,629). Dr. Pachnowski teaches courses at the University in Math Methods for pre-service Secondary Math, Middle Math, and Intervention Specialist majors.	
TBD	TBD	Content Specialist w/ Akron Global Polymer Academy	Workshop Instructor - the Content Specialist will participate with Dr. Holliday in his workshop activities, facilitate the creation of inquiry based lesson plans by the teachers during the workshop, coordinate the Web Repository contents, and work toward leveraging the products of this grant across other school districts.	Master's degree and a minimum 5 years experience teaching science or a related field.	The AGPA is in the hiring process to fill their Content Specialist position which opened because our capable staff member moved back to the research laboratory. The successful candidate will have a relevant Master's Degree and a minimum of five years experience in teaching science or working as a scientist/engineer, strong presentation and interpersonal skills, and an understanding of science education and pedagogy and an ability to relate and explain polymers/science to all ages and backgrounds.	
Jason	Miller	Graphic Designer w/ Akron Global Polymer Academy	Graphics, Infrastructure: Assisting Dr. Gary Holliday and the Content Specialist in preparing materials for the workshop; Web Content: design and maintain project websites, convert workshop materials	Miller received B.S. degrees in Photography and Computer Graphics from Indiana Wesleyan University's School of Design.	AGPA Graphic Design Specialist since 2004, he has helped create a wide range of multimedia science outreach content, including educational videos and an animated short film about the history of rubber.	

			and lesson plans into online formats, create other web resources; produce multiple educational videos on IBL; produce multiple video journals to distill workshop activities and participant's experiences.			
Laurel	Lohrey	Coordinator of Outreach Programs w/ Akron Global Polymer Academy	Logistics: Materials and supply acquisition, project tracking, scheduling, communication, data processing, facilitating where needed to assist all other participants	Lohrey holds a BS Industrial Engineering from the University of Pittsburgh. She spent 5 year as a substitute teacher specializing in Middle School science, math and intervention with Nordonia Hills City School District.	Joining the AGPA staff in 9/2013, she directed the 2014 Akron Regional Science Olympiad this spring (46 events, 461 student competitors, 213 volunteer leaders/helpers.) Prior to joining AGPA, she completed significant grant-work for her school district, and has worked as a programmer, supervisor & database analyst, a natural gas product manager and transportation analyst. She coached a middle school Science Olympiad team for two years.	
Nate	Su	Graphic Designer w/ Akron Global Polymer Academy	Graphics, Infrastructure: Assisting Dr. Gary Holliday and the Content Specialist in preparing materials for the workshop; Web Content: design and maintain project websites, convert workshop materials and lesson plans into online formats, create other web resources; produce multiple educational videos on IBL; produce multiple video journals to distill workshop activities and participant's experiences.	Su received a B.A. in Art with a photography focus, and a Graphic Design minor from Taylor University.	Working closely with Mr. Miller, since 2009, he creates multimedia content for the P-16 section of the AGPA website, as well as print media and artwork for various AGPA projects and initiatives.	
Gary	Holliday, PhD	Assistant Professor Curricular & Instructional Studies; College of Education - University of Akron	Workshop Leader-Dr. Holliday will provide teacher training in inquiry-based methods in the summer workshops (in both summer 2014 and summer 2015) and follow up observation and professional development through the school year.	Dr. Holliday received his Ph.D. in Science Education and he possesses a M.Ed. in Science Education. Dr. Holliday has presented nationally (21 events) and internationally (6 events) on the teaching and learning of Scientific Inquiry and Nature of Science in both formal and informal settings, and has recently co-authored a chapter about exhibit-based professional development and its impact on teachers' pedagogical content knowledge and has published in the International Journal of Science Education.	His doctoral dissertation addressed the impact of professional development in informal science contexts on teachers' content knowledge and discourse. During his five years as a graduate research assistant at the Illinois Institute of Technology, he was assessment co-lead on the High School Transformation Project working with 21 Chicago Public High Schools and was involved in a number of research projects, including work with a	

					<p>research group at the University Duisburg-Essen in Germany. Prior to his work as a science teacher educator, he had 15+ years of experience as a science educator. He has taught high school Biology in Chicago, IL, and his experience with informal education includes work as a science educator at the Museum of Natural History and Planetarium in Providence, RI, as well as the American Museum of Natural History and the New York Aquarium in New York City.</p>
Xin	Liang, PhD	Professor Educational Foundations & Leadership; College of Education - University of Akron	Program Evaluator - Dr. Liang will evaluate the success of the program using assorted metrics	Liang received her Ph.D. in research methodology and teaches doctoral level courses in advanced program evaluation, advanced research design, data collection, and advanced statistics. She specializes in the utilitarian evaluation paradigm and theory-based evaluation methods.	<p>She offers expertise in large-scale program evaluation (e.g., SES, EETT) She is quite skillful in interacting with stakeholders and practicing evaluation as a process for program improvement, which requires timely communication of accurate data. She has established a strong record of working with high-need local educational agencies by consistently providing quality evaluation reports to the NSF, Ohio Department of Education, Ohio Learning Network, E-Tech, Ohio Board of Regents, and Cleveland Municipal School District. Dr. Liang has worked in numerous evaluation projects including:</p> <ol style="list-style-type: none"> 1. Evaluation of Formative Instructional Practices Funded by ODE through Race to the Top; 2. Collaborative Research: Evaluating Student Learning in Geoscience Curricula that Employ Concept Tests Using Electronic Student Response Systems, funded by NSF; 3. Evaluation for QuickStart to College Program, funded by OLN