

A. Need for the Project

(1) **The extent to which the project represents an exceptional approach to the priorities...**

S-ke:g Ha'icu Ma:cig—The Wisdom Project is the name for an Investing in Innovation development project to be located on the Tohono O'odham Nation in southern Arizona. In the Tohono O'odham language, S-ke:g Ha'icu Ma:cig means “Good knowledge” or “Important knowledge.” The words are pronounced “skug hah-chew mah-chig” and bring to mind the wisdom of elders. For this proposal, we will go with the short name The Wisdom Project.

The Wisdom Project is a high school completion and college readiness initiative that will serve the middle school and high school students of Indian Oasis–Baboquivari Unified School District (IOBUSD), as well as youth and young adults who left school but have re-enrolled in one of the IOBUSD alternative schools and youth in the Tohono O'odham Juvenile Detention Center who are students in an IOBUSD alternative education program. The four-year Wisdom Project will serve approximately 1,000 students, after which time the partners are dedicated to sustaining and scaling up the successful strategies and approaches. The Wisdom Project partners are the Metropolitan Education Commission, IOBUSD, the Tohono O'odham Nation, Tohono O'odham Community College, and the University of Arizona. The project will help transform Baboquivari High School and Baboquivari Middle School into high-performing schools with a rigorous, college-readiness curriculum supplemented by support strategies; will improve the use of instructional technology; and will transform and expand alternative education options.

The Wisdom Project addresses **Absolute Priority 4—Innovations That Turn Around Persistently Low-Performing Schools.** The project will help turn around Baboquivari High School, a Title I persistently lowest-achieving school in the second year of a School Improvement Grant, and Baboquivari Middle School, a Tier III school in the School

Improvement process. Although we are not submitting the proposal under Absolute Priority 5, the Wisdom Project is also designed to improve achievement and high school graduation rates in a rural local educational agency (LEA). We refer frequently to the remote location of IOBUSD.

We will provide **targeted approaches to reform** to the target schools, including the AVID (Advancement Via Individual Determination) postsecondary readiness curriculum; dual enrollment and summer bridge programs to facilitate college success; and outreach to parents on how to help students prepare for college. The structure and resources of the Metropolitan Education Commission (MEC) are a key innovation, making our approach exceptional by bringing the resources of the wider community to IOBUSD to bear in helping this district achieve major educational innovations. The MEC will engage the attention of the City of Tucson and Pima County, including concern and investment from the 34 citizen commissioners who represent government, education, business, and the professions. As an advocate for improvement in K-12 education over the past twenty years, MEC has become a local resource for what works in education in Southern Arizona. Bringing the expertise of this citizens' commission will provide new energy and innovation in the reform of Baboquivari Middle and High Schools. The MEC is an advocate for youth in the community, and it has developed high-quality leadership and citizenship programs for youth that it will contribute to this effort. The MEC is home to the Regional College Access Center, a key component of the Wisdom Project.

The Wisdom Project is also designed around **Competitive Preference Priority 7 – Innovations that Support College Access and Success** and **Competitive Preference Priority 10 – Technology**. To focus on college access, we are introducing an online college preparation tool, the Regional College Access Center (RCAC) to a rural school district and will support the online tool with AVID college preparation courses, professional development, and peer training

strategies. We expect that these services will help IOBUSD significantly increase the rate at which its high school graduates enroll in postsecondary education. For the Technology priority, we will be streamlining the district's technology resources and helping the district implement more effective instructional technology. The online resources of the RCAC are also a technological innovation. Students will be able to set up individual college preparation accounts, receive customized referrals, and receive one-on-one academic advising through the RCAC.

(2) Specific gaps or weaknesses in services, infrastructure, or opportunities have been identified and will be addressed, including the nature and magnitude of those gaps...

In May 2008, Baboquivari High School outside the remote village of Topawa had a four-year graduation rate of 39 percent. Across the state of Arizona, Native American high school seniors had a four-year graduation rate of 60 percent; and the state's four-year graduation rate was 75 percent. While the BHS cohort of 2008's graduation rate was notoriously low, the failure to graduate has been a persistent problem at BHS, as this table shows:

School Climate Indicator¹	2007	2008	2009	2010	2011
Four-Year Graduation Rate	53%	39%	48%	55%	56%
Whole School Dropout Rate	21%	19%	26%	21%	9%
Student Attendance Rate	87%	84%	86%	75%	77%

We will comment later on the improvement of certain indicators in 2010 and 2011.

The low rates of educational achievement at BHS correspond to an overall environment of need. IOBUSD serves the main reservation of the Tohono O'odham Nation, which is located in the Sonoran Desert and is home to approximately 13,000 of the 28,000 enrolled tribal

¹ Data from School Improvement Grant Proposals and Reports from IOBUSD.

members. The reservation is the second largest in the United States, encompassing 4,460 square miles (comparable in area to the state of Connecticut). The U.S. Census Small Area Income and Poverty Estimates for 2009 show that 57 percent of children ages 5-17 in IOBUSD live in poverty. Most children living on the reservation rely on school transportation to and from IOBUSD schools, some traveling up to 1.5 hours each way. The long distances between many Tohono O’odham communities and schools create barriers to student and family engagement in education. In addition, many rural and low-income households are less likely to have Internet access; and if they do, they are more likely to use it recreationally than for academic purposes (Gorski, 2006). Tohono O’odham youth are at a technological disadvantage compared to students in urban areas who are living in households with annual incomes above the poverty level. Poverty, combined with the remoteness of the community, is a contributing factor to delinquency. When the BHS cohort with the 39% grad rate were in 7th grade, an estimated 6.5 percent of Tohono O’odham residents under age 25 belonged to a gang, more than six times the estimate of gang membership of less than 1 percent for the U.S. population (Duarte, 2002).

In order to identify the specific gaps that need to be addressed, *The Wisdom Project* planners referenced a study conducted by the Arizona Board of Regents (ABOR, 2011). After analyzing 3,562 transcripts from 76 high schools in Arizona, the ABOR researchers determined eligibility rates of high school students for admission to the state’s public four-year universities. ABOR found that only 32% of American Indians in Arizona passed the four mathematics courses required for university admission (compared to 49% of Caucasian students or 42% of students overall who passed the four mathematics courses). Baboquivari High School’s results in the Arizona Instrument to Measure Standards (AIMS, the test students must pass to graduate high school), show that mathematics is indeed an issue. (See table on next page.) The low

passage rates in mathematics indicate a serious situation that IOBUSD is addressing through its whole-school turnaround of Baboquivari High School. The Wisdom Project will help by bringing targeted reforms to improve mathematics results—and reading results as well.

BHS	2010		2011	
AIMS Results	% of students passed reading	% of students passed math	% of students passed reading	% of students passed math
10 th Grade	31.0%	9.3%	42.9%	3.6%
11 th Grade	20%	5.8%	24.1%	8.3%
12 th Grade	25.0%	8.2%	17.9%	12.5%

At the same time that mainstream students in IOBUSD need their schools to be reformed, segments of the student population need a strong alternative source for their education. For the 2008-2010 school years, the youth in the Tohono O’odham Juvenile Detention Center (JDC) did not have access to school. While the length of stay varies from a few days to up to six months or more, the JDC reports that the longer multi-month stays are becoming more common. In 2010, a classroom was outfitted with 16 workstations, and for the 2010-2011 school year, IOBUSD offered an alternative education class at the JDC using Plato software so that students could learn at their own pace. The Wisdom Project will help turn this learning program into a real school for the youth in the Juvenile Detention Center.

(3) The project will have a positive impact, gauged by importance or magnitude of effect...

The planners predict that the Wisdom Project will have a positive effect with a large impact in the Tohono O’odham community. With small classes of around 70 students in a

graduating cohort, increasing the number of graduates at Baboquivari High School has a large positive effect when measured by percentage. We plan to increase the graduates by five to ten students per year, which will soon result in graduation rates in the 90-percent and above range.

As we explain in Appendix D, the services of the Wisdom Project were selected with their research-proven or field-tested effectiveness taken into account. For example, to help close the achievement gap in mathematics, we are bringing the AVID curriculum to BHS and BMS. The AVID Center's research shows that 61 percent of 8th graders enrolled in AVID take algebra, as compared with 22 percent of 8th graders nationwide. In five states offering AVID, AVID high school students completed the courses typically required for college entry at rates ranging from 90 percent to 95 percent, as compared with a 36 percent completion rate nationally. (See the charts at www.avid.org/res_results.html.) The AVID program will provide math tutoring and will complement the district's use of the enVisions mathematics curriculum.

Even more important than the magnitude of effect is the importance of effect, which the planners feel involves the very preservation of the Tohono O'odham culture. The Tohono O'odham are said to be descendants of the Hohokam, known for their development of sophisticated canal systems that channeled water to irrigate their crops. Three Tohono O'odham strengths are of particular relevance today: **1)** The Tohono O'odham have a long history of solving issues peacefully and taking the time to make decisions that last; in a world of strife, the Tohono O'odham can be leaders in consensus decision-making. **2)** The Tohono O'odham understand their environment and continue to use meteorological principles and ceremonial cycles for planting and harvesting traditional foods found in the Sonoran Desert. **3)** At the crossroads of three cultures—Tohono O'odham, Mexican, and Anglo—the Tohono O'odham have developed understanding and skills critical to living in a globalized society. The

professional development and family postsecondary preparation workshops offered through the project will be key venues for passing on these culturally-relevant ideas and incorporating them into the IOBUSD curriculum. The purpose is to show the students what they as college-going individuals of a unique and valuable heritage have to offer the world.

This is the critical time, the right time, to intervene. Indian Oasis–Baboquivari Unified School District has an experienced, effective superintendent, Dr. Albert Siqueiros, who has invited the partnership to help the district achieve its goals. Dr. Siqueiros has the strong support of the IOBUSD Governing Board, and change is beginning to take hold. If we look back to the table of indicators on page 3, we see that the dropout rate was down in 2011, and the graduation rate—though still unacceptably low—had risen from previous years. Now is a critical time to intervene to keep this positive momentum going. Furthermore, the 9th graders at Baboquivari High School are known as a high-achieving group with great potential. If we act immediately, they will continue and finish high school as an *Investing in Innovation* cohort with so much hope for the future and with the specific skills and credentials needed for them to enter postsecondary education. For example, these students will have taken and passed four years of mathematics and three years of laboratory science. They will have applied to colleges and filled out the FAFSA; they will know how to write personal statements and conduct online research.

The Wisdom Project is part of a larger whole of priorities and actions already in the works on the Tohono O’odham Nation—the wiring of the reservation for high-speed Internet, the School Improvement process, and the equipping of the JDC classroom.

Most important, though, is the recognition by the Tohono O’odham community that now is the time to act to save the next generation of their youth. Anytime a language or a culture disappears, humanity suffers incalculable loss. The Wisdom Project is all about ensuring that

today's Tohono O'odham youth grow up prepared to serve as leaders both in the local community and the broader world. Our goal is to create the conditions for them to pass on their *S-ke:g Ha'ic'u Ma:cig*—their good and important knowledge.

B. Quality of the Project Design

(1) The extent to which the proposed project has a clear set of goals and an explicit strategy, with actions that are (a) aligned with the priorities..., and (b) expected to result in achieving the goals, objectives, and outcomes of the proposed project. (2010 i3 NFP).

First we will present our strategy, and then we will show how actions are aligned with i3 priorities in order to accomplish the project's goals and objectives. (A Logic Model is in App. J.)

A major piece of our strategy will be introducing the AVID curriculum and college preparation strategies to BMS and BHS. AVID, which stands for **Advancement Via Individual Determination**, is a college readiness system that is available to all students in a school but focuses on students in the middle academically—typically those who are earning B's and C's who need extra attention and motivation to meet their potential. AVID serves these students through an elective course in which they “learn organizational and study skills, work on critical thinking and asking probing questions, get academic help from peers and college tutors, and participate in enrichment and motivational activities that make college seem attainable” (“The AVID Elective” on www.avid.org.) AVID serves all students at the school as content area teachers attend AVID professional development and learn AVID strategies from the teacher of the elective. AVID includes tutoring in math and other college readiness subjects.

The Metropolitan Education Commission (MEC) will engage students in leadership and citizenship development and career exploration. The MEC will train students and teachers on the Regional College Access Center website www.metedu.org/rcac/, a college preparation toolkit.

Tohono O’odham Community College (TOCC), a North Central Accredited tribal college, will provide a summer bridge program and dual enrollment opportunities.

The University of Arizona will offer campus tours and academic summer programs. IOBUSD Parent Involvement and Engagement staff will conduct Academic Preparation and Postsecondary Readiness Workshops for students and their families, which will focus on key transitions in the journey to college.

Another strategy involves instructional technology. IOBUSD has a strong start in educational technology. The district has licenses for Plato software, has SMART boards in some classrooms, and is conducting a pilot study with textbooks on Kindles. The Wisdom Project will hire a Technology Trainer to ensure that IOBUSD’s technology tools are standardized and that teachers know and use best practices for incorporating technology into instruction.

The Regional College Access Center (RCAC) will play a key role in our technology strategy. An RCAC Site Coordinator will be dispatched to IOBUSD schools regularly, training teachers, counselors, students, and family members on how to use the RCAC website for college and career planning. The RCAC will be incorporated into the middle school and high school curriculum through instructional technology lesson plans that the Technology Trainer will share with instructors in professional development workshops.

Now we move on to the Goals and Objectives and how they align with i3 Priorities.

Goal 1. To implement a comprehensive high school completion and college readiness model in grades 6-12 at BMS, BHS, and alternative education sites in IOBUSD.

Objective 1.1: Implement the AVID curriculum and college preparation strategies.

Objective 1.2: Offer students leadership, citizenship development, and career exploration opportunities through MEC programs such as the Academy Without Walls summer internships.

Objective 1.3: Provide a summer bridge program and dual enrollment opportunities for high school students in partnership with Tohono O’odham Community College (TOCC)

Objective 1.4: Offer campus tours and academic summer programs in partnership with the University of Arizona.

Objective 1.5: Offer Postsecondary Preparation Workshops to students and families.

Objective 1.6: Define and document the key elements of the high school completion and college readiness model.

Objective 1.7: Implement the AVID model with fidelity.

Goal 1 and Objectives 1.1 through 1.7 are aligned with Competitive Priority 7. This goal relates to program implementation. Relevant measures (such as number of students in dual enrollment) appear in the budget. Objectives with outcome-oriented milestones are listed for other goals.

Goal 2. Improve academic achievement for students in low-performing rural schools and turn BMS and BHS into high-performing schools. This goal aligns with Absolute Priority 4.

Objective 2.1: Improve academic achievement, as measured by academic test scores, of program participants when compared to similar non-participants. At BHS, 60% of 10th graders will pass reading and writing on the Arizona Instrument to Measure Standards (AIMS) or new state assessment by the end of year 2, with new targets to be set then. At BHS, 30% of 10th graders will pass math on the AIMS or new assessment by end of year 2, with new targets to follow.

Objective 2.2: Improve attendance rates at BMS, BHS, and alternative education sites. Attendance rates at BMS and BHS will rise and stabilize at 94% by the end of the project. Attendance rates at alternatives sites will stabilize at 85% or above by project end.

Goal 3. Improve high school graduation and college enrollment rates for rural students in persistently low-performing schools.

Objective 3.1: Increase student-reported engagement of program participants from baseline, as measured by the project's *Engagement Survey*.

Objective 3.2: Increase student-reported college readiness of program participants from baseline, as measured by the project's *College Readiness Survey*.

Objective 3.3: Improve student and parent knowledge of postsecondary preparation, as measured by change in pre-/post *Postsecondary Preparation Workshop Questionnaires*.

Objective 3.4: Lower the dropout rate of IOBUSD schools (achieving a rate no higher than 5%), as measured by the Arizona Dept. of Education. (IOBUSD's dropout rate in 2010 was 20.8%.)

Objective 3.5: Increase the number of students who graduate on time, as measured by number of students entering their freshman year at The Wisdom Project and graduating within four years. Achieve a four-year graduation rate for BHS of 70% by the end of the project. Page 3 has recent grad rates. In year 1, a target four-year graduation rate will be set for the alternative high school.

Objective 3.6: Increase the percentage of students who attend postsecondary education, including universities, community colleges, two-year technical schools, and state-certified apprenticeship programs. This factor will be measured by the number of students accepted to said institutions. According to Higher Education Information, Arizona's statewide rate of postsecondary enrollment was 51% in 2008. IOBUSD had a postsecondary enrollment rate of 16% in 2011. The district needs to reach the statewide rate first and then set its own targets. *Goal 3 and its objectives are aligned with Absolute Priority 4 and Competitive Priority 7.*

Goal 4. Improve the use of technology in instruction and in postsecondary planning so that IOBUSD students are computer literate and tech-ready for college and life.

Objective 4.1: Improve students' technology literacy from baseline, as measured by *TechLiteracy Survey*.

Objective 4.2: Teachers and students will be proficient at using the Regional College Access Center (RCAC) website, as measured by *RCAC Proficiency Rubric*.

Objective 4.3: Instructional technology systems and hardware will be standardized across IOBUSD by the end of year 2 of the project. All teachers will have received training on the instructional technology systems by the end of the project.

Goal 4 and Objectives 4.1 through 4.3 are aligned with Competitive Priority 10 – Technology.

(2) The eligible applicant’s estimate of the cost of the proposed project, per student per year, including costs...to reach 100,000, 250,000, and 500,000 students. (2010 i3NFP).

The current count of students in Baboquivari Middle and High Schools is 500. Over the four years, we anticipate serving 1,000 students as students move through the grade levels. The count includes 6th through 12th grades at BMS and BHS and all students in alternative education over four years. Our estimate of cost for the project is \$750 per student per year. This cost recognizes that the project serves a rural district on an American Indian reservation. If the project is disseminated more broadly, with economies of scale, we estimate these costs:

Reaching 1,000	Reaching 100,000	Reaching 250,000	Reaching 500,000
\$3 million/4 yrs	\$200 million/4 yrs	\$350 million/4 yrs	\$500 million/4 yrs
\$750 per stu per yr	\$500 per stu per yr	\$350 per stu per yr	\$250 per stu per yr

(3) Extent to which the costs are reasonable in relation to objectives, design, significance...

The cost per student is a very reasonable investment in the public school system on the Tohono O’odham Nation, given the critical needs of the students to be served and the anticipated results. In this rural area, several hundred dollars of federal money per student will make a significant impact, especially since Arizona (ranked 48th) has per-pupil spending for education of \$8,660 per student compared to the national average of \$11,681 per student (NEA, 2009).

(4) The potential and planning for the incorporation of project purposes, activities, or benefits into the ongoing work of the eligible applicant and any other partners at the end of the Development grant. (2010 i3 NFP).

The Metropolitan Education Commission is ideally positioned to further develop the proposed strategy and to work with partners to bring it to scale. As a city/county commission, the MEC has contacts with the 15 school districts located in Tucson and Pima County. Its commissioners include superintendents, governing boards, administrators, and higher education representatives, and thus the MEC has a natural venue for communicating successful strategies to schools throughout southern Arizona. The MEC frequently works on projects with school districts and with the Arizona College Access Network (AzCAN), so it is planning to take findings from this i3 project and implement them regionally and statewide through AzCAN.

IOBUSD and the other partners plan to incorporate the initiatives started under the Wisdom Project into their ongoing work. IOBUSD intends to assume the cost for the elements of the Wisdom Project that prove to be successful. The District is prepared to take on the cost of the AVID program and the ongoing support of alternative education after i3 funding ends.

Likewise, the partners plan to continue their strong working relationship with IOBUSD coming out of this project. Indeed, the Tohono O'odham Nation and Tohono O'odham Community College have a high motivation for continuing to work with IOBUSD, because the IOBUSD high school students form the largest available pool of candidates for the College and are the Tribe's future workforce. Dual enrollment and the summer bridge program are intended to continue after the i3 grant. Likewise, the University of Arizona views this project as a vehicle for improving the recruitment of Tohono O'odham students. It has pledged yearly Arizona Assurance scholarships, combining both federal and institutional funds, for this purpose.

The Wisdom Project was designed with replication in mind. The project is composed of discrete strategies that can be reproduced by another group of schools and local partners. The Wisdom Project will make active use of the National College Access Network (NCAN) professional association and its Native American affiliates and all they have to offer for members as well as for students, educators, and families involved in the secondary school-to-college transition. We will share success stories and data so that other NCAN members can replicate our model. Key project personnel and the evaluators will write articles on their findings, and the Wisdom partners will participate in i3 Communities of Practice in Arizona.

C. Quality of Project Evaluation

(1) Extent the evaluation will provide high-quality implementation data and performance feedback, and permit periodic assessment of progress toward achieving intended outcomes.

The evaluators will conduct an implementation evaluation and provide performance feedback. Annual comprehensive evaluation reports will contain program fidelity, process, and outcome data. Evaluators will meet quarterly with program staff to present available data in a more informal and interactive format. See fidelity monitoring plan below. This approach should provide project leadership with an empirical assessment of the program's model of change and permit periodic assessment of progress toward achieving intended outcomes. Evaluation staff will help program staff use data to make the program more effective.

Objectives, Logic Model, and Timeline – Program objectives were listed in the *Project Design* section; the logic model and evaluation timeline appear in Appendix J. Objectives 1.1-1.5 will be measured through observation, structured interviews, focus groups, and review of program records. Fidelity monitoring (referred to in Objectives 1.6 and 1.7) is discussed in the following section. Evaluation of Objectives 2.1-4.2 will be measured as outlined below.

Objective 2.1: Quasi-Experimental Study – To assess the academic impact of the program, we will examine the over-time change in mean individual-level standardized academic test scores of program participants in BMS and BHS as compared to a comparison group of non-participants, where comparable over-time test scores are available. Given that a randomized control trial is not feasible, we propose a quasi-experimental, matched comparison group design, resulting in a rigorous examination of program effects, with strong external validity and statistical controls and matching used to maximize internal validity.

Data Collection Methods – We will use standardized test scores: 1) Arizona's Instrument to Measure Standards (AIMS) in reading and mathematics for grades 6-8 and 10; and 2) the AIMS A (an Alternate Assessment for students with a significant cognitive disability) in reading and mathematics for students in grades 6-8 and 10 who take the AIMS A.

Treatment and Comparison Groups – The comparison group will be selected from similar students who attend proximal schools not involved in Wisdom Project. Students at Tohono O'odham High School, which is located 47 miles away but is also on the Tohono O'odham Nation, will serve as our comparison group for students in grades 9-12. Students at Altar Valley Middle School, which is located 30 miles away, will serve as our comparison group for students in grades 6-8. These matching schools should provide us with a group that of students that shares some key background characteristics with our experimental groups, which will allow us to estimate the academic effects more accurately and reliably. Demographic data of these school communities appear in Appendix C. To verify these assumptions of balance, we will produce descriptive statistics of all relevant observable background characteristics variables at baseline. If adjustments are necessary, in addition to the inclusion of statistical control variables, we may weight with propensity scores.

Sampling Strategy and Effect Sizes – The evaluation sample will be comprised of an observational “experimental group” of students who participate in Wisdom Project and a matched comparison group of equal size from the proximate schools. Based on some cautious expectations, we anticipate having a total of 1050 students (experimental and comparison). Our experimental group will start with 345 students (existing students for whom we will obtain AIMS test data) to which we will add approximately 60 new students for each of the new 6th grade class added for the subsequent years of the study, making our total experimental group with at least one (post-exposure) academic observation equal to 525 students. As we do not have the space to discuss and justify detailed effect size expectations for all measures outlined here, we provide a general discussion for all academic effect outcomes. We believe it is cautious to set a hypothesized minimum detectable effect size at $ES = .25$ (Cohen’s d) for the duration of the research. An effect of this magnitude is slightly larger than Cohen’s “small effect size,” but within the “medium effect” range. And since there is very little empirical research on which to base early college high school effect size expectations, we believe the $d=.25$ to be a prudent balance small enough to minimize our chances of Type II error and big enough to be meaningful. Assuming a confidence level of 95%, power of .80, and a 20% attrition rate overall, and an effect size of $d = .25$, an appropriate target sample size should be approximately 600 participants. This fits well within the parameters of our expected sample size outlined above (525 experimental students + 525 matched comparison students = 1050).

Data Analysis – For students in grades six through eight, and ten (grades for which AIMS test data are available), we will infer impacts on the basis of a four-year longitudinal comparison of students exposed to the treatment with those that do not receive the intervention. Our hypothesis is that the program will positively influence student academic achievement (i.e. have a positive

effect on test scores). We will infer positive impacts if the overall observed individual-level regression-adjusted change from year to year are positive and statistically significant. Programmatic effects will be estimated with a multi-level regression model that predicts year-to-year academic outcomes on the basis of pre-program academic baseline measures, time variant exposure, as well as other theoretically relevant statistical control variables expected to influence academic outcomes. The key indicator of interest is the time-variant program participation variable. This can be modeled as a fixed-effects dummy variable that will statistically capture the effect of participating in the program for a set period of time or as a continuous variable to better estimate over-time (i.e. year-to-year) exposure effects. Although multi-level models are complicated, the interpretability of the effects variable is straightforward: it will quantify the time-period impact of participating in the program over the course of the evaluation. Dependent variables will be the standardized yearly academic tests discussed above. Aggregate descriptive statistics will also be provided. We are more limited in our capacity to evaluate observable change in students who attend the alternative schools and youth who reside at the juvenile detention center, who for theoretical reasons should be examined separately. The numbers of students involved at these sites will likely not allow for sufficient statistical power.² We will analyze the descriptive academic data for these students over time, and assess them for patterns of change; we will, however, likely not be able to perform inferential statistical tests.

Objective 2.2: Attendance data will be gathered from school records. Aggregate annual attendance and dropout rates will be examined to determine change over time.

² During 2010-2011, IOBUSD's alternative middle school had 12 students, and alternative high school had 18 students. There were 10-25 youth in the juvenile detention center at any one time.

Objective 3.1: Student Engagement will be examined using change over time of student self-reported data obtained on an annual student survey, using the beginning of the sixth grade administration as a baseline. Change in student engagement will be measured using scales selected and single-item measures from the Motivation and Engagement Scale (MES). The MES assesses adaptive and maladaptive cognitive and behavioral dimensions of motivation and engagement. The developer has conducted confirmatory factor analyses to demonstrate construct validity of the 11 subscales. Analyses demonstrate significant correlation with achievement and other academic outcomes, showing criterion-related validity (Martin, 2009, 2009b). Developer reports mean Cronbach's alpha for the 11 subscales as .79 for the high school version and .78 for the junior high school version. Average test-retest reliability for high school version is .73 (Martin, 2008). We propose to assess engagement outcomes by way of a longitudinal analysis and multilevel empirical modeling, similar to that described above. The key time-variant dependent variable, again, will be yearly participation in the program. With this model we will estimate the program's observed effect on the MES as students advance through the program. These effects can be modeled as a summative total impact over time or estimated year-to-year effects by grade or total time in program. Since we do not have a comparison group, our effects will be estimated as compared to baseline scores (i.e. zero program exposure). Aggregate comparative scores for both groups will also be produced.

Objective 3.2: College Readiness will be examined using questionnaires. The questionnaires will be designed by evaluation staff using previously validated questions/scales; scales will be drawn from the *Educational Planning Survey* which examines early academic goals and educational planning activities, and includes items concerning: educational expectations and career goals; people and factors helping them select classes and high school program of study;

people and factors helping them explore the types of education, training, and work they might pursue after high school; and, plans to pay for college (ACT *College Readiness* report). We propose to assess college readiness using the same methods as described under student engagement. Aggregate comparative scores for both groups will also be produced.

Objective 3.3: Postsecondary Preparation Knowledge will be examined using questionnaires.

The questionnaires will be designed by evaluation staff and will reflect the content of the Academic Preparation and Postsecondary Readiness Workshops. Questionnaires will be administered to parents and students who attend Academic Preparation and Postsecondary Readiness Workshops. The questionnaires will measure the change in self-reported knowledge of postsecondary preparation. Questionnaires will be administered directly before and after the workshops (pre- and post-test) by the local evaluator.

Objectives 3.4, 3.5, & 3.6: High School Graduation, Drop Out Rates, College Enrollment –

High school graduation and drop-out data should be available for both program participants and comparison students in neighboring schools. To assess program outcomes, we will (1) present aggregate comparison rates for both groups, and (2) estimate the effect of the program on these eventualities (i.e. graduating or not, dropping out or not) by logistically regressing this dichotomous outcome on a program participation variable and covariates of interest. The first set of comparative statistics will present an intuitive comparison of overall program rates with both those of comparable students and the district as a whole. The regression estimates difference in probability of graduating and dropping out associated with attending Wisdom Project as compared to similar students (comparison group) and all other students (random selection of district students). Since college enrollment data will not be available for a matched comparison group, we will compare the aggregate rates against pre-established targets.

Objective 4.1: Technology Literacy: To measure the impact of the technology component, students will respond to an annual computer-based technology literacy assessment, TechLiteracy (Learning.com). The assessment is aligned to the International Society for Technology in Education-S 2007 standards and provides psychometrically sound data on student technology proficiency. The assessment uses both performance-based questions where students must demonstrate proficiency and multiple-choice questions to assess understanding of technology concepts. We will evaluate programmatic effects longitudinally, using the multi-level modeling strategy already described. The key time-variant dependent variable will be participation in the technology-focused component. This variable will estimate the effect of participation (versus not participating) on the outcome of interest (technology literacy measure). Since we do not have a comparison group, our effects will be estimated as compared to baseline scores (i.e. zero program exposure). Aggregate comparative scores will also be produced.

Objective 4.2: Technology Proficiency – With help from the Technology Trainer, PRG will develop a *RCAC Proficiency Rubric* to assess the program-wide integration of the Regional College Access Center (RCAC) website. This rubric will measure abilities to navigate and utilize the RCAC website. The rubric will be administered annually by the local evaluator to all Project Wisdom students and teachers.

(2) Extent the evaluation will provide sufficient information about the key elements and approach of the project to facilitate development, replication, or testing in other settings.

Monitoring Program Fidelity - The fidelity monitoring approach will be based on the core principals of AVID and will include observations, interviews, and focused groups based on the evaluation model presented in *The Magnificent Eight: AVID Best Practices Study*.

Definition and Documentation of Key Components: The evaluation team will work with program

staff to document the approach and its key elements; the analysis of evaluation data will help to identify the effective components of the model, and how and to what extent those components lead to improved academic achievement and college readiness. Documents developed will include: program overview, model handbook, planning guide, lessons learned, and research results. The evaluation approach and fidelity monitoring tools will be critical to facilitate further development, replication, or testing in other settings. Research questions appear in Appendix J.

(3) The plan includes sufficient resources to carry out the project evaluation effectively.

The proposed plan includes sufficient resources to carry out the evaluation effectively; a total of 15% of the federal funding is allocated to project evaluation. The proposed independent evaluator is The Policy & Research Group (PRG). All PRG staff members at the analyst level and above have advanced degrees including three PhDs. They are well qualified to conduct the assessment for this project. PRG staff have conducted thirteen federal evaluations including rigorous evaluations, both quasi-experimental and experimental (randomized control trials). Please see Appendix F for a two-page bio of Dr. Eric Jenner, the P.I. for the evaluation; he is the Director of Research and routinely uses sophisticated econometric modeling and analytic techniques, including matched pair analysis/propensity score matching, to examine the impact of policies and programs. In addition to PRG, Dr. Lynette Fleming, is a member of the evaluation team, who will provide on-site assistance. Dr. Fleming has an existing relationship with MEC and experience working with the target population; she will: review instruments for cultural competency and coordination of pilot testing; meet with MEC and PRG periodically to discuss findings; and, conduct local data collection. She will acquire testing data and other student-level data; administer or train others to administer surveys; observe the program to examine fidelity; train MEC on tracking process measures; and, in years 2-4 conduct key stakeholder interviews.

D. Quality of the Management Plan and Personnel

- (1) **The adequacy of the management plan to achieve the objectives of the proposed project...as well as tasks related to the sustainability and scalability of the project.**

Our management plan consists of protocols and assigned responsibilities as well as a timeline.

Protocol 1: Partner responsibilities are clearly defined. The Metropolitan Education Commission, as applicant and fiscal agent, will be responsible for oversight of the project. IOBUSD is jointly responsible with MEC for the quality of project delivery. The Policy and Research Group will evaluate the project. Partners have submitted letters of support to show that they understand their roles from the outset. A Memorandum of Agreement or contract between MEC and each partnering organization will be written at the beginning of the project.

Protocol 2: Each goal has project personnel responsible for achieving it.

Goal 1: Implement a comprehensive high school completion and college readiness model.

- **Responsible person:** Project Director, with support from the Principal Investigator.

Goal 2: Improve academic achievement for students in low-performing rural schools and turn BMS and BHS into high-performing schools.

- **Responsible person:** IOBUSD Superintendent, with support from the Project Director.

Goal 3: Improve high school graduation and college enrollment rates for rural students in persistently low-performing schools.

- **Responsible person:** IOBUSD Superintendent, with support from the Project Director.

Goal 4: Improve the use of technology in instruction and in postsecondary planning so that IOBUSD students are computer literate and tech-ready for college and life.

Responsible person: Technology Trainer, with support from the RCAC Coordinator.

Protocol 3: Yearly planning meetings will map out timelines and milestones. Every summer, the project staff, representatives of the partners, and the evaluator will hold a planning meeting to determine the coming year's milestones that will measure progress on achieving goals.

January-May 2012: The first five months of the project will be dedicated to planning and hiring. Detailed milestones will be established at an initial planning meeting. For example:

Milestones: BMS and BHS students improve in attendance by 5% over fall 2011 rates of attendance. Attendance in alternative education programs increases by 10% over fall 2011.

June-July 2012

- TOCC enrolls BHS students in dual enrollment and in the summer bridge program.
- The MEC involves IOBUSD students in its summer youth leadership and career programs.
- The Technology Trainer and others plan for the introduction of AVID and the RCAC.
- Teachers attend the AVID Summer Institute and join AVID online communities.

August 2012 – May 2013

- AVID is introduced; all other activities described in the project design continue.
- The Mentoring Coordinator is matching alternative ed. students with mentors.
- Academic Preparation and Postsecondary Readiness Workshops are held.
- The Technology Trainer works with teachers and the district to streamline technology and improve instructional technology strategies.

Milestones: The semester grades of students at BMS and BHS taking pre-algebra and algebra have improved cumulatively by 8 percent when compared with fall 2011 measures.

The four-year graduation rate for BHS will rise to at least 64%. In grades 6th through 12th, the percent passing AIMS tests for reading and math will be 5 percent higher than in spring 2011.

June 2013-December 2015: Similarly detailed timelines with plans and milestones will be produced for each year. **Sustainability and Scalability:** At the same time, the Wisdom Project personnel and partners will focus on opportunities for sustaining project successes and scaling up components. The Principal Investigator and the IOBUSD Superintendent will identify schools where the Wisdom Project can be replicated, such as in Tohono O’odham High School, Altar Valley Middle School, and in public schools serving the Akimel O’odham in the Phoenix metro area (Salt River and Gila River communities). Appendix C has relevant demographics.

(2) The qualifications of the project director and key project personnel...

Dr. June Webb-Vignery will serve as Principal Investigator with ultimate responsibility for the success of the Wisdom Project. As Principal Investigator (P.I.), Dr. Webb-Vignery will ensure that the project accomplishes its major objectives; will oversee fulfillment of partnership agreements; will convene an advisory group and make good use of the group; and will provide for sustainability of the project after federal funding. The P.I. will oversee the budget and project expenditures and will ensure the evaluation is conducted effectively and ethically.

Since 1991, Dr. Webb-Vignery has served as Executive Director of the Metropolitan Education Commission (MEC). Under her leadership, the MEC has undertaken creative, far-reaching programs that encourage underrepresented groups to graduate from high school and seek higher education. These projects include creation of the RCAC and expansion of its services to four school districts in Tucson, funded by the Helios Education Foundation. The MEC is also delivering a Challenge grant project, has provided services to two GEAR UP projects, and was a leader in the citywide LINKS (Linking Intervention Networks for Kids in Schools) initiative. With her experience leading complex projects, Dr. Webb-Vignery is ideally qualified to guide the Wisdom Project and to contribute significantly to the i3 community.

Dr. Albert Siqueiros, Superintendent of Indian Oasis–Baboquivari School District (IOBUSD), will oversee the implementation of the project in IOBUSD. He will see that the project personnel employed by IOBUSD perform to the highest standards. Dr. Siqueiros is a hands-on superintendent who is leading a system-wide reform in IOBUSD; he is responsible for the implementation of two federal School Improvement Grants in the district. Previously, he served as assistant superintendent and Chief Academic Officer in Tucson Unified School District.

The other *Wisdom Project* positions include a **Project Director**, an **Administrative Assistant**, and half-time **RCAC Site Coordinator** to be employed by the MEC; and a **Technology Trainer**, a **Mentoring Coordinator**, a **School Counselor**, and an **Administrative Assistant** to be employed by IOBUSD. Native American candidates will be actively recruited.

The **Project Director** (to be hired) will have at least a master’s degree in a relevant field and will have experience managing complex, multi-partner projects. The **RCAC Site Coordinator** holds an M.Ed. in School Counseling and has college access experience. For the **Technology Trainer** position, we will work with the University of Arizona’s South Campus (UA South) to recruit a graduate of one of its Educational Technology programs. The other positions will be hired with the MEC and IOBUSD recruiting excellent, experienced candidates.

Resumes for key **project personnel** and the **evaluators** appear in Appendix F.

Conclusion: The Wisdom Project partners invite the U.S. Department of Education to join with the MEC, IOBUSD, the Tohono O’odham Nation, Tohono O’odham Community College, the University of Arizona, and with parents and families, to ensure that a group of 1,000 students on the Tohono O’odham Nation, including those among them who have made grievous mistakes in their young lives and reside in detention, are remembered, that they become visible, and that they receive a quality education. Thank you, readers, for your time and consideration.