

A. Need for the Project and Quality of the Project Design

(1) An exceptional approach to the priorities addressed: We are seeking validation grant funding for *Using Data to Inform College Access Programming in the 21st Century High School (Using DICAP)* which addresses Absolute Priority 2, “Innovations that Improve the Use of Data,” and Competitive Preference Priority 6, “Innovations that Support College Access and Success.” *Using DICAP* combines tiered school-level and student-level interventions previously undertaken by the Council for Opportunity in Education (COE). The planned school level intervention grew out of work conducted by COE’s Pell Institute for the Study of Opportunity in Higher Education, COE’s research arm. That study examined rates of college enrollment in the Denver Public Schools in order to identify ways in which college access interventions could be better planned and modified (Buckley and Muraskin, 2009). A student-level pilot, conducted by COE with support from the General Electric (GE) Foundation begun in 2006, forms the other component of *Using DICAP*. *Using DICAP* was developed based on the needs of participating districts, schools and College Access Programs¹ to understand data and ultimately engage in data-driven decision-making (DDDM) to promote positive student outcomes and ultimately college access and success.

Using DICAP seeks to organize and systematize data collection and analysis of data from high schools, their College Access Program partners, and colleges and universities. In fact,

¹ “College Access Programs” refers to a broad set of efforts, funded by federal, state and private funds, which encourage middle and high school students to aspire to, prepare for, enter and succeed in college. Federally funded programs include: the TRIO Talent Search program (serving 363,300 students at a cost of \$142 million annually); the TRIO Upward Bound program (serving 77,520), the Federal GEAR UP program (serving 748,000).

while the results of each of the two initiatives described is promising, we believe that the combination of these two interventions has the potential for a more substantial and widespread effect on outcomes for students. Ultimately, our efforts are expected to have effects school-wide as well as effects on targeted groups of low-income and first-generation students based on current Talent Search eligibility criteria. Use of data combined with targeted interventions in the GE pilot has increased enrollment in rigorous courses, increased student grade point averages, and increased on-time promotion (Kailikole, 2009). Support from an i3 validation grant will allow *Using DICAP* to include additional postsecondary data (e.g. college course-taking and college completion) to be integrated with district and school level data providing further opportunity to tailor support services consistent with the data and also consistent with school and College Access partner recommendations. The GE Foundation, as indicated in Appendix D, will provide matching funds for *Using DICAP*. Educational Testing Services (ETS) in conjunction with The Education Alliance at Brown University will serve as project evaluator.

Using DICAP is an exceptional approach, combining the tiered school-level and student-level interventions. We intend to establish evidence (validation) that this strategy for using data (that has not been widely adopted among local education agencies, high schools or College Access Programs) would allow such groups to make informed decisions about and recommendations for (1) student course taking; (2) grade level achievement goals; (3) academic support to meet grade level achievement goals; (4) programming for transitioning from middle to high school; (5) activities and events that encourage students to aspire toward STEM majors and careers; (6) engaging parents in college-going activities, and (7) engaging community leaders, including business leaders and college administrators and faculty, in efforts to raise college going and success. As a proposed validation study with the goal of eventual scale-up (replication), the

Using DICAP strategy is integrated as an (additional) add-on component of the Federal TRIO Talent Search Program (a College Access Program), a program integrated into the daily functions of the participating high school. That is to say, we seek to add *Using DICAP* methods and practices in DDDM to the repertoire of embedded Talent Search counselors (also referred to as College Coaches). These coaches will integrate the *Using DICAP* structure seamlessly into their existing practices in the high school and will also facilitate the dissemination of data analysis, recommendations, interventions, and outcomes.

Using DICAP grew out of the GE pilot that took advantage of existing College Access resources in the targeted cities. While the *Using DICAP* model as developed has been built to supplement the foundation of “base Talent Search” services, in the GE pilot any existing College Access Program serving the school was the foundation program. If one College Access Program was working in a particular school, and if that program agreed to adopt the GE Pilot Model, we built from that program rather than beginning from scratch. Currently, most College Access Programs are in schools with large percentages of low-income, first-generation, and minority students. However when more than one of these programs is in a single school (a common occurrence) their services are not always well coordinated, nor are these services systematically allocated to students in every grade level or aligned with grade level needs. *Using DICAP* is a model that coordinates services aligned with grade level needs which can be broadly replicated as a critical addition in other Talent Search programs in high schools with high numbers and percentages of high-need students. This model is specifically aligned with new legislative requirements for Talent Search included in the Higher Education Opportunity Act of 2008 (P. L.

110-315)² and will assist Talent Search programs' compliance with these legislative and regulatory changes.

In the *Using DICAP* model, at least 20% of students to be served in each grade level will receive targeted services from the summer before high school enrollment through high school graduation. Services are targeted particularly to low-income, first-generation students and, to a large extent, delivered through learning communities made up of students in the same grade, enrolled – to the extent feasible – in the same courses. Students are selected for participation based on criteria developed by the Talent Search program in collaboration with schools to ensure the most in-need of those eligible are served, and that a balance is achieved in the learning communities of those eligible yet at varying degrees of need to create the right mix needed to promote peer support (King, 1996; Kulik and Kulik, 1982; McDonough, 1997). This established program pattern of course taking begins at ninth grade and continues throughout their high school enrollment. Six high schools in the City of Erie School District and the Jefferson County (Kentucky) School District have already agreed to participate in the proposed i3 validation study implementation. Erie and Louisville were chosen because of the proximity of GE businesses. In Erie, the three schools chosen include all non-selective secondary schools in the district. In Louisville, schools were chosen based on the current work of College Access Programs in them, their high enrollment of high-need students, and, for one, proximity to the headquarters of GE.

Using DICAP is being validated in six schools where at least 2/3 of the students enrolled are high-need students as defined for the i3 competition, aligned with already-existing Talent Search

² P.L. 110-315 requires that Talent Search programs, beginning in the 2011-2012 academic year, provide not only counseling and information services, but also provide sufficient academic supports to allow some Talent Search students to succeed in rigorous curricula.

eligibility requirements. (In Talent Search, 2/3 of students served must be from families with incomes below 150% of the poverty level and also be potential first-generation college students.) At each of these schools, all of the students enrolled – with the exception of students who are not documented – are eligible for TRIO Talent Search. Students that are at or below 150% of poverty alone have low high school and baccalaureate degree completion rates – 66% graduate from high school, 38.6% enter college (4.9% declare a STEM major), and 7.1% earn a bachelor’s degree (1.3% earn a bachelor’s degree in STEM) (Kailikole, 2007).

There will be two learning communities constituted at each grade level in each of the six high schools, each comprised of 30 students for a total of 60 students per grade level and 240 students per high school. Students within these learning communities receive tutoring in core academic subjects (math, science, English), strategies for improving study management skills, mentoring and career counseling both during and after the school day based on their individual needs as identified via the *Using DICAP* initiative. Services are a mix of those already provided by the Talent Search program but are provided with more frequency and intensity via the learning community model. In this application we are referring to three models:

- The “Base Talent Search Model” which provides information and counseling services about college enrollment. Historically, Talent Search programs have only served a small percentage of students in individual schools.
- The “GE Pilot Model” which combines DDDM with intensive college access and academic support services for at least 20% of students in a school. College coaching and academic services are organized through and often delivered within Learning Communities.

- The “*Using DICAP Model*” which couples the “GE Pilot Model” with whole school DDDM to supplement the base Talent Search services for all individually eligible students to create the two-tiered model of school-level and student-level intervention.

Consistent enrollment in learning communities and the individual and group instructional and counseling support delivered via the communities was the principle supplement to the “base Talent Search” model introduced by the GE pilot. *Using DICAP* will expand the number of learning communities established in the GE pilot. In the fall of 2010, three high schools will have learning communities at all four grade levels (ninth through twelfth) totaling 720 students; one school will have learning communities at three grade levels (ninth through eleventh) totaling 180 students, and two schools will have sixty students at the 9th grade level. By the 2013-2014 school year, all six schools will have 240 students per school participating in college-prep learning communities for a total of 1440 students. While all students at participating schools will have access to – and encouraged to take advantage of “base Talent Search” services such as information on financial aid, college nights, and application assistance, and while full-school data on a number of factors such as FAFSA completion, college enrollment and success will be tracked and utilized – not all eligible students can be served by the more rigorous intervention introduced by the GE pilot. This creates the opportunity for a rigorous evaluation of these more intensive supports using matched comparison groups. COE considered and rejected the possibility of using a random assignment for the following reasons: 1) College Coach and principal reluctance to turn away eligible students who seek the more intensive services and 2) the joint selection by Principals and College Access providers based on co-established guidelines to represent the broadest range of students for the peer support component in the learning community is a key component of the model. While the Learning Community does serve as a

point of coordination in the delivery of services (e.g., college visits, after-school tutoring, assigning of mentors) based on individual student need, it also is the place where key services (e.g. study skills instruction, career and college exploration, some peer mentoring) are provided in more depth and with more frequency to students in a group setting.

(2) A clear set of goals and explicit strategy with actions that are (a) aligned with the priorities, and (b) expected to result in achieving the goals, objectives, and outcomes:

As indicated above, *Using DICAP* addresses Absolute Priority 2 and Competitive Preference Priority 6. The proposed program is a validation study that combines two component efforts that introduced a strong emphasis on data analysis and DDDM into school-wide and targeted student college access efforts respectively. *Using DICAP* builds on the student-targeted effort begun in 2006 by local College Access Programs working with COE with funding from the GE Foundation in the School District of the City of Erie and in the Jefferson County (Kentucky) School District.

The goal of *Using DICAP* is to positively impact college enrollment and success, as well as student achievement, student growth and related factors in six schools with large numbers and percentages of high-need students by using targeted and whole-school interventions including data collection, data analysis, and the dissemination of analysis. A secondary goal of *Using DICAP* is to validate a new model for Federal Talent Search programs that will allow these projects to meet a new legislative requirement that they provide sufficient support to allow students to succeed in rigorous secondary school curricula.

The pilot integrated best practices from Federal College Access Programs – including the best practices in the current Talent Search model and introduced more intensive targeted

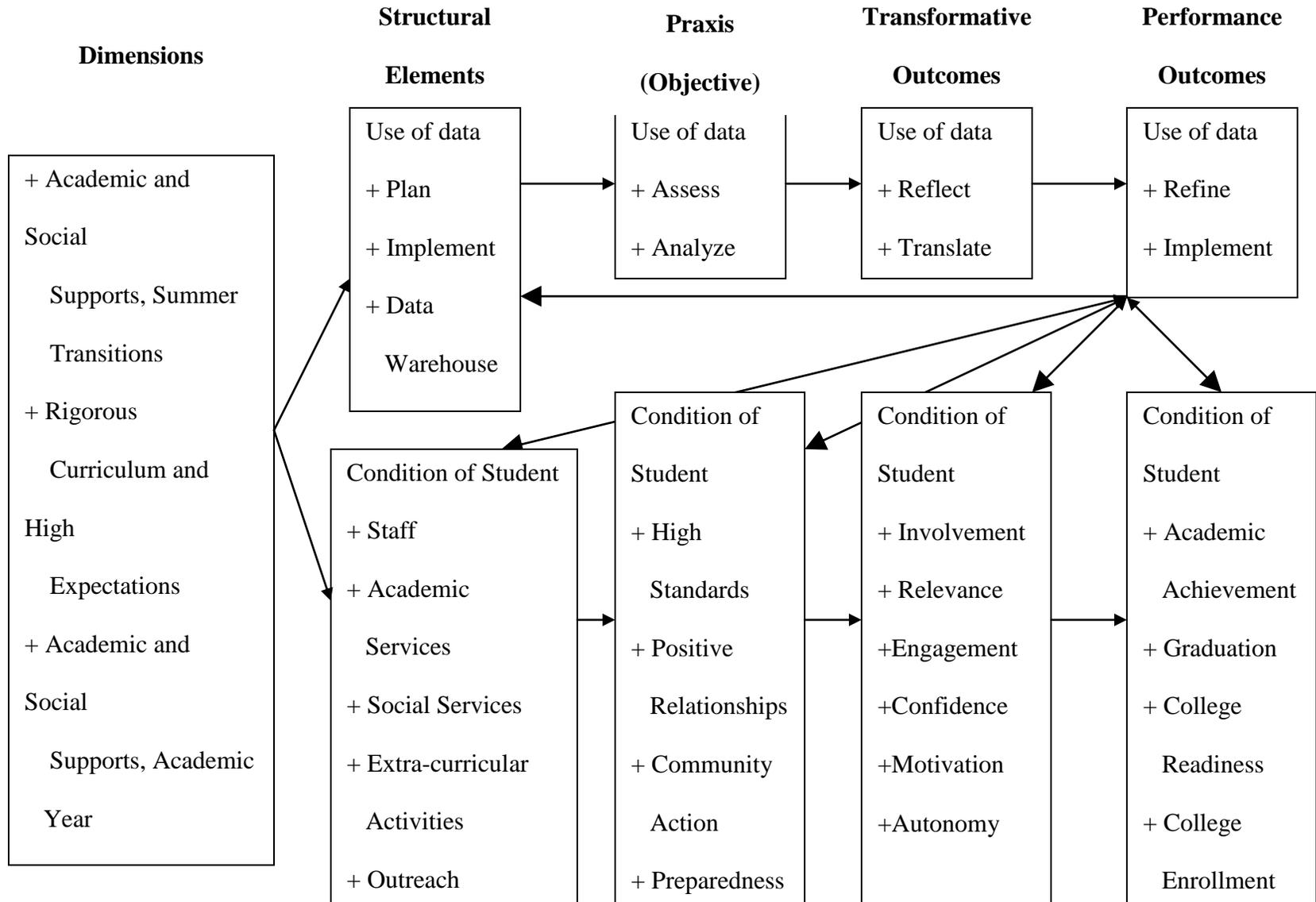
interventions and DDDM on an individual student level into the high school via coaches. *Using DICAP* will expand upon the lessons learned from the pilot by coupling the intervention with DDDM on a whole school level. The strategy for *Using DICAP* involves creating a *Data Warehouse* through which timely data can be provided to partners and key stakeholders for their use relevant to the learning community design. In addition to the College Access Program staff, key stakeholders include district administrators, school leaders and faculty, local college administrators, and corporate and foundation supporters. The Warehouse is an integrated database that connects relevant information from other sources (school district data management; *Using DICAP* services data; National Student Clearinghouse postsecondary data³; and survey and interview data) into a single accessible format. College Access Programs and high school faculty and school leaders are trained to be “in-house” data coaches. At the onset, *Using DICAP* will track the 2004 graduating class from each high school through college graduation where applicable using the National Student Clearinghouse data. The Warehouse will support the utilization of transcript data and other records to disaggregate students by category of need (e.g. by income, minority group, etc), and available achievement data (e.g. grade point average, rigorous courses completed, test scores). Warehouse data use training will include formulating, asking, and answering relevant questions using the data, when and how to disaggregate data, interpreting data and other’s interpretations, and locating and using the data and data analyses functions/offering available via the Data Warehouse. The type of questions asked, and the need to access data at an individual student level varies by stakeholder role. The *Using DICAP* initiative also produces templates for data collection, a guidebook for the data praxis (defined as

³ Through the National Student Clearinghouse, high schools and College Access Programs are able to track students’ post-secondary experience through certificate or degree completion.

practice in the analysis of data, reflection on the results of the data analysis, and translation of the results into action) and an integration toolkit for partnering college access providers and school districts.

The Logic Model for *Using DICAP* (Figure 1), and Chart 1 in Appendix H which expands upon the Logic Model, lay out the objectives and expected outcomes of *Using DICAP*. Both include five dimensions in which change/intervention has been or will be introduced (Summer transitions; enrollment in rigorous curricula with high expectations; providing academic and social supports during the academic year in learning communities; interventions affecting the broader parent and civic community; and specific interventions tied to college choice and readiness. The second column in the Chart (Structural Elements) delineates those elements, including use of data, *Using DICAP* introduces via each of the five dimensions. The third column, Integrating Praxis, delineates the objectives of *Using DICAP*. Most objectives relate to changes in the cultures of the schools – so that they become college-going cultures. However, objectives related to change in the broader community are included as well. The outcomes for *Using DICAP* are twofold. Transformative outcomes (column 4 in Chart 1) are those that will result when key partners and stakeholders use data to reflect on the services and practices – changes in student attendance, performance, achievement and course taking in high school and in college – and translate their findings into actions that can be implemented in the program. The performance outcomes provide measurable results, for example, improved student academic achievement (GPA and test scores), increased graduation rates for low-income, first-generation, and minority students, increased college readiness (entrance exam scores, FAFSA completion, admissions applications), and increased college enrollment. The logic model included in Figure 1 summarizes these elements.

Figure 1: Logic Model for *Using DICAP*



Our pilot programs are formulated using DDDM and preliminary work to ensure success has already been completed (e.g., establishing relationships, data sharing agreements, etc). Before implementing the GE Pilot, baseline data on student achievement (e.g. grades, promotion, graduation rates) and behaviors (e.g. course-taking, attendance, drop-out rates) (Adelman, 1999 and 2004; Cabrera and La Nasa, 2000) by grade level were collected and analyzed by COE and our partners. All students and grade levels were included in the baseline analysis. As data collection continued, an assessment of need was conducted for the participating schools and college access providers. In collaboration with all partners, the baseline data analysis and needs assessment were used to determine the student selection criteria, support service provided, the mode of delivery, the method of integrating the services into the high school daily schedule, and the integration of college access personnel into the high school community.

The introduction of the sharing of data often had simple, yet important effects. Assuring these data were immediately used by the College Coaches enabled them to intervene with encouragement, realism, and academic supports such as tutoring. A surprising result of the examination of data was increased enrollment of targeted students in honors courses – and better performance of these students when they were placed in these courses. In one school, for example, where the mean GPA for GE Pilot students the previous year in Algebra 1 had been 1.9, the College Coaches suggested that some students take Honors Algebra as an alternative to Algebra 1 based on the students’ career interests and differences in the instructors’ teaching styles. Thriving under the more individualized instruction in the honors course, and re-enforced by the College Coach’s confidence in their abilities, the College Access Program students taking Honors Algebra achieved a mean 2.8 GPA in Honors Algebra, outperforming other Honors Algebra students (mean GPA was 2.5). This example also illustrates how often decisions

affecting long-term options of low-income students are not driven by data on student ability but rather on other factors, such a student’s “attitude” or social skills, or simply the number of sections available. A final example: schools serving high numbers of low-income students that track the students who complete FAFSA’s (Free Application for Federal Student Aid) have been able to increase the number of students actually entering college (Tierney and Venegas, 2009).

(3) The extent to which the proposed project is consistent with the research: Section B outlines three major studies that were key in designing both *Using DICAP* and the pilot upon which *Using DICAP* is built; Constantine et al., 2006; Olsen et al., 2007; and Kemple et al., 2005. These studies meet the standards required for validation grants; additionally, the design drew extensively upon the longitudinal and qualitative college access work of the Consortium on Chicago School Research (Roderick et al., 2008; Roderick et al., 2006). Further, in incorporating individual components, we looked to the research on those particular components, for example: Data Driven Decision Making (Means et al., 2009), summer bridge to high school programs (Cahalan et al., 2004; Maxfield et al., 2000), enrollment in rigorous curricula (Adelman, 1999; Herold, 2003), learning communities (social networks and peer ability groups) (Berkner and Chavez, 1997; Cabrera and La Nasa, 2000), early college exposure and counseling (Engberg and Wolniak, 2010; Perna et al., 2008).

B. Strength of Research, Significance of Effect, and Magnitude of Effect

The proposed project, *Using DICAP*, is a combination of practices and strategies from College Access Programs that have had statistically significant effect on attendance, promotion to the next grade level, core academic (rigorous) course-taking patterns and completion, achievement in mathematics and science, completion of high school, applying for financial aid, taking college entrance exams, enrollment in college and post-secondary degree attainment.

Cited studies on college access programs: Talent Search (Constantine et al., 2006), Upward Bound Math-Science (Olsen et al., 2007) and Talent Development High Schools (Kemple et al., 2005) were all conducted using quasi-experimental designs. For the Talent Search study, Constantine et al. created carefully matched comparison groups using a retrospective analysis of administrative data sets to have internal validity. The large sample, including 6,186 students in the treatment group and 54,529 students in the comparison group, was compiled from three states: Florida, Indiana and Texas and increased the generalizability of the findings. For the Upward Bound Math-Science study, Olsen et al. also created matched comparison groups using a retrospective analysis of administrative data sets to have internal validity.

Since Talent Search and Upward Bound Math-Science are individual level interventions, student outcomes in these studies were analyzed at the individual level. These studies informed decisions regarding the services for individual students when the GE Pilot was originally developed. In the study of the Talent Development High School Model, student outcomes were analyzed at the school level since the model is a school level intervention. This level of analysis was critical in determining factors for integrating college access services into the high schools for *Using DICAP*. To ensure internal validity in their study, Kemple et al. used a comparative interrupted time series analysis. This research method works in two dimensions. The interrupted time series methodology allowed researchers to measure the change in student outcomes before and after the school began using the model. A matched comparison group of non-Talent Development schools provides estimates of the deviations from the baseline and the impact of the model on student outcomes. Using the comparison schools and the large student samples (1,500 students per grade cohort) increased the generalizability of the findings in this study.

In combining the best practices of these three models, the GE pilot has had both individual and cohort level impact on particular student outcomes. We expect *Using DICAP* to have similar positive effects. In the pilot project, ninth grade participants had a rate of attendance 18 percentage points higher than the attendance of non-participants on average. This outcome is consistent with findings by Kemple et al. with statistically significant (significant at 0.1 and 0.01 levels for different cohorts) increases in average ninth grade attendance rates which were greater than average attendance rates for comparison groups by a magnitude of five percentage points. We have to get and keep students in the classroom to move them toward high school graduation. Similarly, students must be promoted in a timely manner. Kemple et al. found that college access programming improved the promotion from 9th to 10th grade by 8% (significant at .05 and .10 levels for year 1 and year 2 cohorts respectively). In our pilot program, the promotion rate for participants from 9th to 10th grade was 16 percentage points higher than non-participants. Constantine et al. found that students participating in college access programming were more likely to graduate from high school at a rate of magnitude of approximately 14 percentage points higher than non-participants, 18 percentage points higher than non-participants to enroll in college and 13 percentage points higher (all significant at .01 level). Increasing attendance, grade-level promotion, high school graduation rates and college enrollment rates are all indicators of success for *Using DICAP*.

Other indicators of success are student course-taking (whole cohorts have enrolled in rigorous academic courses) and achievement in mathematics and science (individual and whole cohort improvement in grades and GPA). Olsen et al. found students participating in college access programming increased their average GPA in mathematics from 2.7 to 2.8 and in science from 2.7 to 2.9 (both significant at the .01 level). Moreover, they found that participants were 10

percentage points more likely to take chemistry and 15 percentage points more likely to take physics (both significant at the .01 level). Chemistry and physics are considered part of a rigorous (or college-going) curriculum (Adelman, 1999). In addition to college enrollment, students' readiness for college and post-secondary degree attainment are indicators for success. College readiness is measured by applying for financial aid, taking of college entrance exam and college entrance exam scores. Constantine et al. found that students participating in college access programming applied for financial aid at a substantially higher rate, 62% and 52%, than non-participants, 35% and 33%, respectively (both significant at the .01 level). Moreover, they found that participants were more likely to take college entrance exams, at a rate of 44%, than non participants, at a rate of 27% (significant at the .01 level).

The practices and services in *Using DICAP* are based on the services and practices that were indicated as important contributors to student outcomes in the research by Constantine et al., Olsen et al., and Kemple et al. The practices and services are also informed by other research on college access programming such as dual enrollment, advanced placement, and early college. Practices and services were chosen because they emerged as important contributors not only in the quasi-experimental design research but in other studies as well (Cahalan et al., 2004; Maxfield et al., 2000; Muraskin, 2007; Perna and Swail, 2002). These practices and services include: rigorous curriculum; block scheduling; tutoring and instruction in academic success behaviors; learning communities; early college exposure and counseling; help with understanding and applying for financial aid and scholarships, etc.

Kemple et al. also indicated that using data and DDDM was also an important contributor to student outcomes. Having used data in our GE pilot, we learned that using data is an acquired skill (Means et al., 2009); and tailored the model to provide more intensive training. We also

learned that data use suffers from bias (Birkland et al., 2005; Honig, 2003; Spilane, 2000); and is not always looked upon favorably (Feldman et al., 2001; Dembosky et al., 2005). Despite the realities and challenges faced in the use of data, we see the benefits of such efforts to achieve the desired student outcomes.

C. Experience of the Eligible Applicant

(1) The past performance of the eligible applicant in implementing complex projects: The Council for Opportunity in Education (COE) is a non-profit organization whose membership includes over 1080 colleges and community-based organization with a particular commitment to expanding college opportunity. COE, which was incorporated in 1981, is the only national organization with affiliates in all fifty states focused on assuring that low-income students and first-generation students have a realistic chance to prepare for, enter, and graduate from college. COE's strategic priorities include:

- Program Improvement and Development for the more than 3,400 governmentally and privately funded college opportunity programs in more than 1,500 colleges and community agencies nationwide.
- Research through the Pell Institute for the Study of Opportunity in Higher Education which examines issues of college access and poverty as well as identifies, evaluates, and encourages strategies that expand opportunity;
- Advocacy with Congress and the Department of Education for TRIO, GEAR UP, Pell Grants, and other college access and success programs that assist low-income and first-generation students;
- Professional development for opportunity educators – including COE's annual conference, seminars, workshops, professional learning communities, video conferences,

webinars, and other web-based idea exchanges;

- Teaching and learning strategies in Science, Technology, Engineering, and Math (STEM) through the Louis Stokes Institute for Opportunity in STEM Education that address access and opportunity in these disciplines.

COE has a long history of managing complex projects as well as working in partnership with others to do so. For its members, COE offers a full range of services at every stage in the process of conceptualizing, securing funding for, operating and improving college access and college retention programs focused on low-income, first-generation and minority students. The quality and consistency of COE services has been recognized both by agencies of the Federal Government and by private foundations. For example for over twenty years, the U.S. Department of Education has selected COE as their major provider of federally funded professional development for TRIO educators and the colleges and agencies which sponsor them. Its Academic Affairs Unit provides training in areas ranging from regulatory compliance, to fiscal management, to program evaluation, to curricular improvement. Specialized funding has also been provided to COE by the Department to provide training in best practices in college access and retention programming to minority serving institutions. Other federal agencies such as the Corporation for National and Community Service have utilized COE to implement multi-state initiatives partnering with TRIO programs. Presently COE's Louis Stokes Institute for Opportunity in STEM Education, with funding from National Institutes of Health, is working to develop and disseminate project-based curricula for the 965 TRIO Upward Bound and Upward Bound Math-Science Programs. These curricular modules focus on translational research utilizing projects involving HIV/AIDS research, clinical research trials, and CSI investigations.

National foundations and university systems are also partnering with COE. For example, as

part of the Chancellor's Closing the Gap initiative, the University of Maryland system is working with COE's Pell Institute to examine obstacles to graduation particularly for low income and minority students at six of its campuses. The Lumina Foundation, in addition to funding an ongoing research of the Pell Institute, has also involved COE as a national partner in its national KnowHow2Go campaign. COE is assisting in six of Lumina's sixteen targeted states to create state-wide networks of policy makers and practitioners to advance college access. Finally, the General Electric Foundation has chosen COE as its college access partner in its \$150 million *Discovering Futures* program which is working to improve mathematics and science curricula and management capacity in six cities where it has major businesses.

(2) The extent to which an eligible applicant provides information (b) that the nonprofit organization has significantly improved student achievement, attainment or retention.

COE's impact on student achievement and retention occurs on several levels; two are discussed here. COE, and its predecessor organizations, has been a primary architect in the design of federally funded College Access Programs since the mid-1970s. Recommendations gathered from COE members and its state and regional associations have been accepted by Congress (in many cases with few, if any changes). Accepted recommendations include: definition of eligibility for services (reauthorization of 1980); listing permissible services (reauthorization of 1986); definition of measurable outcomes (reauthorization of 2008); legislative mandate to reward prior experience based on outcomes (reauthorization of 1980 and ongoing). The discussion of the impact of TRIO Talent Search on student achievement is included in Section B.

COE has also impacted student achievement in direct student service programs which it has led. For example, in the GE-funded pilot projects in Erie and Louisville, we found the program

had significant impact on-time promotion, rates of attendance and GPA.

- ❖ For promotion: In Erie, ninth grade participants were promoted on-time at 85%, 14 percentage points higher than the comparison group (significant at the .01 level). Because the data is dichotomous, an Odds Ratios was used to determine effect size. The odds or chance of participants being promoted on-time was 2.89 times more likely than the chance of non-participants. In Louisville, ninth grade participants were promoted on-time at 76% (in 07-08) and 86% (in 08-09), 15 and 18 percentage points higher, respectively. The chance of participants being promoted on-time was 2.02 and 2.31 times more likely than the chance of non-participants, respectively. The tenth grade participants were promoted on-time at 81% (in 07-08, this is the 06-07 9th grade cohort), 16 percentage points higher. The chance of participants being promoted on-time was 2.40 times more likely than the chance of non-participants. All Louisville finding are significant at the .001 level.
- ❖ For attendance: In Erie, participants had a mean attendance of 162 days compared to 158 days for non-participants (significant at the .005 level). In Louisville, the 07-08 participants had higher mean attendance, 159 days compared to 156 days (significant at the .05 level) for 10th graders, and 160 days compared to 153 days (significant at the .001 level) for 9th graders. Moreover, there was a significant increase mean attendance, 152 days increased to 159 days, for the 9th grade cohort from 06-07 (9th grade) to 07-08 (10th grade) (significant at the .001 level). Attendance in 9th grade accounted for 4% of the variance on 10th grade attendance. The percent of variance was small when looking at the mean attendance since the cohorts all met the standard of being enrolled 95% of the school year.
- ❖ For overall GPA: In Erie, the mean GPA of the 9th grade participant cohort was 3.344 compared to 2.475 for the 9th grade nonparticipant cohort (significant at the .001 level).

Participation in the pilot accounted for 20% of the variance in GPA. In Louisville, we have found smaller differences between participants and nonparticipants however significant increased improvement in the 06-07 cohort with a .78 increase in grade points from 9th to 10th grade, an 54% increase (significant at the .001 level). GPA of the 9th grade participant cohort accounts for 16% of the variance in the GPA in the 10th grade of this same cohort.

D. Quality of the Project Evaluation

In determining the quality of the evaluation, the Secretary considers five factors addressed in the subsequent paragraphs. Additional evaluation design information is included in Appendix H.

(1): Method include a well-designed experimental study or well-designed quasi-experimental study.

The *Using DICAP* program outcomes will be evaluated using a rigorous quasi-experimental design incorporating a matched-comparison group. While the most rigorous design is one that includes random assignment, this will not be possible as per the program requirement and enrollment processes outlined in the program plan. The *Using DICAP* initiative seeks to achieve its goals through a two-tiered strategy. **Tier 1** pertains to the comprehensive data system and its associated training (for identifying needs and interventions, and conducting ongoing monitoring and improvement efforts with students) as an add-on to the already existing college access program. **Tier 2** pertains to the aggregate information provided to the school system about all of its students regarding rates of college access and success after high school.

To answer the following research questions, a rigorous design will be employed by evaluators to address the counterfactual (i.e., what would happen in the absence of the *Using DICAP* program). Questions assessing outcomes for both tiers of the initiative are included

below. *Using DICAP* program staff have been able to obtain student level data, and believe with data sharing agreements in place they can obtain data for individual students from participating and non-participating schools.⁴

Tier 1: Student outcomes. Additional research questions focus on the program impact on students as a result of *Using DICAP* program participation (i.e., learning communities and one-on-one time with coaches).

1. Does *participation* in the *Using DICAP* program increase the average level of student academic performance, in comparison to other non-participating students?
2. Does *participation* in the *Using DICAP* program result in increases in rigorous course taking patterns, retention/promotion rates, college entrance exam rates, college applications, etc., in comparison to other non-participating students?
3. Does *participation* in the *Using DICAP* program result in increased rates of post-secondary enrollment and degree attainment, in comparison to other non-participating students?
4. Do different groups of students (e.g., most in need versus least in need, English Language Learners, etc.) benefit from this initiative in different ways, in comparison to similar groups of non-participating students?

Tier 2: School outcomes. Evaluators will leverage qualitative and descriptive analyses to address the following research questions:

1. Has *school participation* in the *Using DICAP* program promoted (school/coach) use of data and techniques that integrate data when working with individual students specifically and in the college access program overall?

⁴ These data must be linked by the unique state identifier (SASID) to track growth over time, but the individual students will not be identified.

2. Has *school participation* in the *Using DICAP* program promoted the use of college access/success data to inform curricular and programmatic decisions related to student matriculation and the pursuit of a post-secondary education?

To answer the proposed research questions specific to individual students and initiative impacts for Tier 1, the first proposed analysis involves a matched comparison group of students within the same schools eligible for participation but not served based on program capacity (that is, students received Talent Search services but not receiving the *Using DICAP* add-on). The second proposed analysis involves an assessment of impacts on proposed student outcomes over time. Growth modeling will be conducted with individual student level data for those students served by the program, comparing initial status to status over time on average. This analysis will include a comparative assessment of the impact of the program on individual growth trajectories relative to the trajectories of non-participating students.⁵

To answer the proposed research questions regarding program impacts at the school level or for Tier 2, a comparative short interrupted time-series (SITS) (Bloom, et al., 2001; Bloom, 1999; Shadish, Cook, and Campbell, 2002) analysis will be conducted at the school level, the level at which the initiative is targeted. Evaluators will examine trends in state aggregate achievement levels within the districts/schools over time for the population assessed.⁶ The goal of these analyses is to measure any observed difference in average levels of student achievement and other outcomes for all grade level students across the schools attributable to school participation

⁵ See Raudenbush and Bryk, 2002, Singer and Willett, 2003. All proposed analyses will be conducted using multilevel models.

⁶ The program has specified assessments as well as select subtests be the outcomes by which they assess program impact.

in *Using DICAP* as compared to the matched non-participant schools.⁷ For information about the power for analysis, refer to Appendix H.

(2): The extent to which the methods of evaluation will provide high-quality implementation data and performance feedback.

Evaluators will examine the context of implementation (school and district) as well as the interplay among college access program staff, school staff, parents, students and outside programs. Research questions applicable for Tiers 1 and 2 of the initiative include:

1. What training, supports, and services were provided and how do they align with the program plans and goals?
2. What characterizes the implementation context (i.e., schools, coaches, students)? In what ways did the context characterize and influence implementation (e.g., collaboration, organization, parent involvement, etc.)?
3. What was the level of implementation (quantity/quality) and variability of professional development/support for schools and coaches?
4. What was the level of implementation (quantity/quality) and variability in the services students received?
5. What are the recommendations regarding the requirements to sustain the program and implement it in other settings from schools, coaches, and students?

To answer the first proposed research question, evaluators will collect and summarize a combination of quantitative (descriptive) and qualitative data. Specifically, data from surveys, interviews, and observations of learning communities will be used to demonstrate changes in

⁷ Crossovers may occur via student movement but these analyses are proposed at the aggregate school level (since it is unlikely that schools will become treatment schools).

practice and attitudes towards the use of integrated *Using DICAP* techniques over time. To gauge the extent to which the program is being implemented and sustained, student participation in ongoing learning community teams and the amount and frequency of coaching time will be collected for each student. The analysis of these data will contribute to the program's efforts to monitor the degree to which the program is being implemented as planned.⁸

(3): The extent to which the evaluation will provide sufficient information about the key elements to facilitate replication.

In particular, data from the implementation evaluation will provide critical feedback regarding the key elements required to successfully replicate the current program in other settings. Additionally, important lessons learned obtained through interviews, focus groups and surveys of all pertinent stakeholders will enable future program implementation efforts to benefit from the challenges and obstacles encountered in the implementation of the current initiative. Moreover, findings from the outcome analyses will help to underscore the targeted areas and types of participants for whom the current intervention is most effective.

The *evaluation design* will consist of formative and summative components. The formative component will include both qualitative and quantitative analyses of data gathered during the first 18 to 24 months of project implementation, and will be used to improve the project as it is implemented in its second through fifth years. The majority of the objectives for the formative component will be processes-oriented rather than outcomes-oriented. The formative component will continue on a smaller scale during the third through fifth years of *Using DICAP*

⁸ Depending on usability and timeliness of implementation data from this initiative, these data may be included into the final treatment only models by the evaluators (to predict variation based on levels of implementation for the treatment group).

implementation to document fidelity to the final design of the project.

The summative component of the evaluation will include quasi-experimental and other quantitative statistical analyses to determine whether the identified goals were achieved. Most of the objectives of the summative component will be outcomes-oriented; however, it will still include some process-oriented objectives so implementation can be described.

The summative evaluation will include activities matched to the initiative's goals with respect to professional development, learning communities, and parent involvement, as well as the achievement of those goals by college access providers, teachers, students, and parents. However, the top priorities of the evaluation will be the program's impact on student performance; student/teacher/parent attitudes and attributions about attending, and student/parent participation in college going activities. Research questions include:

1. What is *Using DICAP*'s impact on participating student's likelihood of graduation from high school?
2. What is *Using DICAP*'s impact on participating student's likelihood of enrollment in and graduation from college? Two-year colleges? Four-year colleges?
3. What is the immediate and long-term impact of the program on student performance?
4. Does the immediate impact of the program vary from year to year? How?
5. How does student performance compare when disaggregated (when possible) by race/ethnicity, gender, school, socio-economic status, English language proficiency, or disability status of students?

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

Both ETS and the Education Alliance are experienced in evaluating programs of this size (refer to section G). Resources have been allocated at a level commensurate with the proposed effort as per the program specifications and grant requirements. Each organization responsible for co-conducting the evaluation have committed to providing access to expertise, personnel, and data to ensure the quality of the evaluation. A memorandum of agreement will be executed among all parties post-award.

(5): The extent to which the proposed evaluation is rigorous and independent.

As evidenced by the design plan outlined in the previous paragraphs (and in Appendix H), the evaluation will be conducted with the required rigor as stipulated in the grant. The Education Alliance and ETS, the proposed co-evaluators, are independent and external to all operations of the districts, schools, the program and staff (COE), and TRIO/Talent Search.

E. Strategy and Capacity to Bring to Scale

1. The Number of Students Proposed to be Reached by the Project and the capacity of the eligible applicant and any other partners to reach the proposed number.

During the course of i3 funding, the *Using DICAP* will serve 6,170 students as follows:

	Erie		Louisville		Total	
	Learning Community	Whole School	Learning Community	Whole School	Learning Community	Whole School
2010-11	<u>600</u>	<u>2660</u>	<u>360</u>	<u>830</u>	<u>960</u>	<u>3490</u>
2011-12	<u>660</u>	<u>2780</u>	<u>480</u>	<u>1560</u>	<u>1140</u>	<u>3920</u>
2012-13	<u>720</u>	<u>2890</u>	<u>600</u>	<u>2200</u>	<u>1320</u>	<u>5090</u>
2013-14	<u>720</u>	<u>2890</u>	<u>720</u>	<u>2770</u>	<u>1440</u>	<u>6170</u>
2014-15	<u>720</u>	<u>2890</u>	<u>720</u>	<u>3280</u>	<u>1440</u>	<u>6170</u>

As described earlier, this project grows out of on-going partnership involving local College Access partners delineated in Section G and six schools as well as the District Administrations

both in Erie and Jefferson County. The project was begun in 2006 and thirteen of the partners are presently involved in and committed to this collaboration. All partners are fully on board as documented by letters – included in Appendix D. Drawing on our four years of experience and the collaborative relationships developed and the involvement of school leaders in the development of this proposal, we are confident in our ability to meet these projected numbers.

2. The eligible applicant’s capacity to bring the proposed project to scale.

Using DICAP is being directed by Dr. Nicole Norfles a former program officer, with the Oprah Winfrey Foundation who has both on the ground experience with College Access Programs and many years experience in managing complex projects. Additionally, COE will rely on the resources of its 1080 member colleges and community-based agencies and 53 state and district affiliates to bring *Using DICAP* to scale.

- * From the inception of its 2006 GE Foundation pilot, *Using DICAP* was intended to be scaled. The pilot introduces a model to assist Talent Search programs to meet expected legislative and regulatory changes which did occur and are required by the Higher Education Opportunity Amendments of 2008 (HEOA, P.L. 110-315).
- * By design, *Using DICAP* is intended to reduce the burden and increase the control of school leaders over College Access Programs operating in their schools;
- * COE and its constituent state and regional association provide extensive technical assistance and professional development to institutions and agencies that conduct Talent Search programs. These meetings and other opportunities (webinars, video-conferences, professional learning communities, and manuals) provide numerous opportunities to disseminate information regarding the *Using DICAP* model, step by step information on how to implement it, and the benefits of implementation.

* The GE Foundation – which provided the initial monies necessary for the development of the *Using DICAP* model and which is providing the match for this expansion and validation – has agreed to publicize the model and its benefits to local communities (as appropriate based on the results of the proposed project) in the foundation community.

3. The feasibility of the proposed project to be replicated successfully in a variety of settings and with a variety of students.

Using DICAP could be built upon a number of College Access Programs, for example, TRIO Upward Bound or State or Partnership GEAR UP programs. COE chose to build its replication on TRIO Talent Search because of the relative dependability of Talent Search funding⁹ and the impact of changes in Talent Search included in the 2008 Higher Education Opportunity Act. The 470 Talent Search programs operate in all fifty states and the territories in urban and rural areas. A profile of the 2,884 Talent Search secondary schools is included in Table 2 in Appendix H.

Talent Search target schools have higher percentages of high-need students as defined for the i3 competition. For example, a higher percentage of students attending Talent Search target schools are from low-income families as compared to students from other schools by the design of the program (40 percent of all students in grades six through 12 enrolled in Talent Search target schools were eligible for the free lunch program, a proportion 17 percentage points higher than the 23 percent of student other schools. Similar trends exist for students from minority backgrounds who made up over half of the enrollment in Talent Search target schools, compared with 33 percent in non-target schools.

⁹ A provision in the TRIO Talent Search legislation, commonly referred to as “Prior Experience” rewards sponsoring institutions or agencies that meet their prior grant’s outcome objectives by providing them a bonus of up to fifteen points in the next five-year funding cycle.

4. The eligible applicant's estimate of the cost of the proposed project.

The U.S. Department of Education recognizes that the costs of implementing the new legislative mandate in HEOA to support students succeeding in rigorous secondary school curricula will raise the cost per student in Talent Search. Conversations between program representatives and Department officials suggest that the cost of providing more intensive services will be approximately \$1,200 per student, compared to approximately \$400 per student which is the present cost. It is anticipated that beginning in the 2011-2012 academic year, all Talent Search projects will provide a combination of more intensive services to some students (such as those provided in *Using DICAP's* learning communities), and less intensive services to others. The costs outlined below are consistent with the anticipated costs of complying with the new Talent Search legislative mandate.

Replication Stage One – 126 Schools served by 63 Talent Search Projects in 8 states – 100,000 students: \$16.9 million additional Talent Search Costs; \$1.1 million dissemination and technical assistance costs; \$800,000 cost of adopting model to schools with large percentages of English Language Learners; \$2.9 million additional Data Warehouse costs.

Replication Stage Two – 250 schools served by 125 Talent Search projects in 11 states – 250,000 students: \$38.6 million additional Talent Search costs; \$1.8 million Dissemination and Technical Assistance Costs; \$800,000 Cost of Adapting Model to reach more students with disabilities; \$2.8 million Additional Data Warehouse costs.

Replication Stage Three – 500 schools served by 250 Talent Search projects in 21 states - 500,000 students: \$77.2 million additional Talent Search costs; \$1.8 million Dissemination and Technical Assistance Costs; \$5.6 million additional Data Warehouse costs.

5. The mechanisms the applicant will use to broadly disseminate information and support further development and expansion.

COE and its partners in *Using DICAP* will use all of the mechanisms available to them to broadly disseminate information regarding the *Using DICAP* model and to support further development, expansion and replication of the model. COE and its partners will utilize internal mechanisms: COE's national meeting (which draws over 1,700 educators interested in college opportunity each year); other meetings (e.g., the National College Access Network and the National Council for Community and Education Partnerships); the 64 constituent regional and state association meetings; COE's website, monthly e-news letters, and magazine (*COEnetworks*). COE will disseminate information about the project broadly through its affiliated networks such as Lumina Foundation's KnowHow2Go Network involving college access professionals in 16 states and the Higher Education Secretariat including more than forty Washington-based higher education associations. The GE Foundation, the Erie and Jefferson County School Districts, ETS and the Education Alliance at Brown will also disseminate information about the model within their networks.

F. Sustainability

(1) The extent to which the eligible applicant demonstrates that it has the resources, as well as the support of stakeholders to continue the project.

Based on the results of the project, at the conclusion of i3 funding, the *Using DICAP* model will have been validated and a Data Warehouse integrating data from high school, college, and college access program levels will have been established. As their letters of support attest, GE and the other partners in *Using DICAP* are committed to continuing current college access funding and working to secure increased College Access funding (for example, through the fall

2010 Talent Search competition). Early in the summer of 2010 -- independent of the decision regarding this application -- COE will approach the Pennsylvania and Kentucky Higher Education Assistance Agencies to seek their support for developing the College Access Data Warehouse for Talent Search programs and other interested College Access programs throughout these states. If the Data Warehouse funding can be secured, all other aspects of the model at present rate can be funded through TRIO Talent Search funds.

(2) Planning for the incorporation of project purposes, activities, or benefits in the ongoing work of the applicant and partners.

COE's Pell Institute has begun discussions with several offices within the Department of Education as well as with several Foundations regarding an initiative to identify "models of best practice" or "promising practice" in the delivery of federal access and retention services. Such a program would include an ongoing capacity to disseminate information regarding these models. At present, the Best Practices effort is one of COE's two highest priorities. Assuming validation of the *Using DICAP* Model, the model and the protocols established with ETS and Brown through this validation grant provide an excellent framework for this continued effort.

College access efforts, particularly for under-served populations have been core to the mission of the GE Foundation for over forty years. Validation of the Foundation's investment in college access in partnership with COE would be incorporated into its on-going work. As their letters of commitment attest; the school districts, corporate stakeholders, and colleges located in Erie and Louisville are committed to *Using DICAP* and its underlying college access services for the long-term, and contingent on validation intend to incorporate its strategies and approaches into their on-going approaches.

G. Quality of the Management Plan and Personnel

The initial *Using DICAP* management plan involves two local College Access collaboratives each coordinated by a local partner working closely with the project director at COE. The Data Warehouse would initially be housed at COE. An organizational chart for the project is included in Appendix H. Full staffing at each high school includes two College Coaches who report to their respective College Access Program director. Meetings of the Collaborative, which include the High School Principal, the College Access Program Director, and the College coaches, are held on a monthly basis and chaired by the Collaborative Coordinator. These meetings address such items as: the definition of core elements in each of the dimensions or interventions (See Chart 1 in Appendix H), Professional Development, particularly with respect to data utilization, planning for consortium-wide activities such as college trips, and problems in implementation. The *Using DICAP* director will attend these meetings at least quarterly.

Each Collaborative includes individual high schools and their College Access Partners.

Erie College Access Collaborative (No Coordinator is presently identified)		Louisville College Access Collaborative (Coordinator, Joseph McCormick, Kentucky College Access Network)	
High Schools	College Access Partners	High Schools	College Access Partners
Central	Northwest Intermediate Unit Talent Search	The Academy at Shawnee	The University of Louisville Office of Community Engagement-
East	Greater Erie Community Action Committee Upward Bound; Pennsylvania State University-Behrend College Access Program	Fern Creek	Kentucky State University Talent Search

Strong Vincent	Gannon University School of Education	Moore High School	University of Louisville Upward-Bound
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(1) The Adequacy of the Management Plan

For the first year, COE has established a calendar of tasks to be accomplished, deadlines for completing the tasks, and personnel responsible for their completion. This calendar is included as Chart 3 in Appendix H. Tasks related to implementation, replication and evaluation are included and both responsibilities of the COE staff and those of each of the partners are included. The chart will be expanded to include more precision as discussions with the partners continue during the summer of 2010. COE’s Executive Vice-President, who will supervise *Using DICAP*, will meet frequently with the Program Director to assure that all planned activities are proceeding as scheduled, to discuss obstacles encountered as well as approaches to resolving any difficulties. Each partner in *Using DICAP* will sign a subgrant agreement that outlines their responsibilities under the project and the timetable for meeting those responsibilities. As has been the case in the GE Pilot, subgrant agreements include language that results in termination of subgrants should the partner be unable or unwilling to provide the services outlined in the agreement.

COE’s Vice-President for Business and Finance and its grants accounting staff will provide the Project Director a monthly accounting of all expenditures under *Using DICAP* as well as quarterly projections of future spending. Grants accounting staff, together with COE auditors, have established monitoring protocols to assure that expenditures by partners are consistent with the subgrant agreements and in line with work completed.

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

Dr. Nicole Norfles, whose resume is included in Appendix C, has agreed to serve as Project Director. As Education Program Officer with the Oprah Winfrey Foundation, Dr. Norfles was responsible for leading and monitoring the Foundation's national and international education initiatives including the Oprah Winfrey Leadership Academy for Girls. **Qualifications of the Director include:** Experience in managing, including fiscal management of complex projects with multiple locations; advanced degree in management or educational administration; doctorate preferred; familiarity with research on college access and success, particularly for low-income and minority students; and strong communication skills.

Qualifications of the Senior Data Analyst include: Formal or informal training in Database Management Systems administration and maintenance, database design, analysis and management; extensive experience as a database designer/information systems analyst, database manager or database administrator and experience in data analysis; decision support including demonstrated proficiency with analytical software; Bachelors degree or the equivalent; and strong communication skills.

(3) The qualifications, including relevant expertise and experience, of the project director and key personnel of the independent evaluator.

The Education Alliance at Brown University has served the education community since 1975, and has evolved to include evaluation, applied research and development, with special attention to low performing schools and issues of equity and diversity. In delivering expert services for research and evaluation, planning, and professional learning, the Alliance effectively partners with schools, districts, and state departments of education to apply research findings in developing solutions to educational challenges.

Kim Sprague, who will serve as co-director of the evaluation, has broad experience in conducting both experimental and quasi-experimental evaluations. She has overseen the design and management of recently awarded Striving Readers' project and incorporation of random assignment designs into Alliance evaluation awards. Additionally, she has been responsible for the design, implementation and management of regional and national level evaluations employing both longitudinal and causal analyses – including six rigorous evaluations of magnet school awards for the 2004-2007 implementation cycle. (Her resume is included in Appendix C).

Educational Testing Service (ETS), founded in 1947, is a non-profit organization whose mission is to advance quality and equity in education for people worldwide by creating assessments based on rigorous research. In addition to assessments, ETS conducts educational research, analysis and policy studies, and develops a variety of customized services and products for (1) teacher certification, (2) English-language learning, and (3) elementary, secondary and post-secondary education.

Mario Yepes-Baraya will serve as co-director of the evaluation with particular emphasis on implementation. Dr. Yepes-Baraya has over twenty years of experience in research and evaluation of educational interventions, and in assessment development in science, mathematics, and language. He has evaluated or validated initiatives and products designed to improve student learning and close the achievement gap in reading, mathematics, and science in grades K-14 as well as evaluated professional development programs in education that use theory-based models and innovative technologies to enhance teaching quality and school effectiveness. His resume is included in Appendix C.