



**i3 Validation
Proposal Narrative**

Table of Contents

Competitive Preference Priority.....1

Sec. A: Quality of the Project Design.....2

Sec. B: Significance.....16

Sec. C: Quality of the Management Plan and Personnel.....20

Sec. D: Quality of the Project Evaluation.....27

Competitive Preference Priority 10—Technology

The New Teacher Center's (NTC) comprehensive model has proven successful in LEAs through both on-the-ground implementation of its program and its innovative digital tools, [REDACTED]

[REDACTED] In addition to its face-to-face supports and services, under this proposal NTC will support its three partner LEAs with the [REDACTED] site and [REDACTED]

The [REDACTED] will ensure the effectiveness of beginning teachers in all three LEAs, wherever geographic distances and/or shortages of specialists make a full program of face-to-face mentoring impractical. This online program provides specialized pedagogic and content mentoring to new teachers of special education and grades 6-12 math and science. [REDACTED]

Participants report that they are better prepared for general and content-specific teaching as they gain a clear understanding of the teaching and learning process in their curriculum area. Data indicate that effective, confident teachers reach students successfully and stay in teaching.¹

The [REDACTED] will be delivered through the [REDACTED]. This newly developed suite of easy-to-use technology solutions is designed to support asynchronous and synchronous mentoring. [REDACTED] will also house the online versions of the [REDACTED] [REDACTED] tools, allowing mentors and mentees to keep mentoring and observational data organized and secure online. Program leaders and NTC staff can review data collected by professional teaching standard or other topic, for a single mentee or a hundred (in order to uncover trends). This organizational facet of the online tools will make mentor-mentee meetings more fruitful; mentors' efforts can be better targeted since both student and teacher growth trends will be clearly delineated over time. Moreover, [REDACTED] permits users to upload *and annotate* observational videos for viewing and discussion.

A. Quality of the Project Design

Over the past 14 years, the New Teacher Center (NTC) has served thousands of new teachers and mentors--24,000 teachers and 7,500 mentors in 2010-2011 alone-- improving the education of approximately 1.5 million students in over 30 states. NTC has provided countless other teachers, mentors and school leaders with research-based resources, such as continuums for gauging teacher and mentor development and other innovative professional development tools for mentors, teachers, school leaders and program leaders. In order to assure that the project's effectiveness can be established across a variety of student populations, NTC has partnered with LEAs that represent a dense urban district, a widespread rural Area Education Agency, and a large multi-ethnic metropolitan LEA. Together with Chicago Public Schools (IL), Grant Wood Area Education Agency (IA), and Broward County Public Schools (FL), NTC will address the urgent need for increasing teacher effectiveness and retention through the strategies called for in Priority 1: Improving the Effectiveness and Distribution of Effective Teachers or Principals.

A1. The goals, objectives and outcomes for the NTC i3 Validation Grant proposal are:

- **Goal 1:** *Measurably increase the instructional effectiveness of participating new teachers by the end of the grant period.*

Objective of Goal 1: The percentage of retained new teachers who are deemed effective or highly effective will exceed that of the control group at a level of statistical significance. This rating will be based on student achievement and other teacher effectiveness measures, including observation data, teacher surveys, and local/LEA-based teacher evaluations.

- **Goal 2:** *Measurably increase the achievement of students of participating teachers through*

program implementation in participating LEAs by the end of the grant period.

Objective of Goal 2: Students of teachers participating in the NTC intervention will demonstrate at least a 1.0 year increase in annual academic growth, as demonstrated by state testing scores, value-added growth measures, and/or additional locally-validated instruments. Student growth will exceed that of the control group by a statistically significant measure.

- **Goal 3:** *Measurably increase the retention of participating new teachers by the end of the grant period.*

Objective of Goal 3: After two years of mentoring, retention of participating teachers within their high-need LEAs will increase by 10-15%, exceeding control group retention by a statistically significant measure (after accounting for possible reductions in force that disproportionately affect new hires).

- **Goal 4:** *Build capacity in LEA partners to fully implement, execute and sustain a comprehensive teacher induction and mentoring program after the grant period ends.*

Objectives of Goal 4:

- Participating mentors, teachers, and partners will commit to all elements of NTC's two-year teacher induction program as described in this proposal, the aim of which is to increase the number of highly effective teachers, thereby raising student achievement.
- All partners will organize and participate in facilitated communities of practice among grantees; this ongoing supportive communication will encourage LEA partners to collaborate in solving problems and add innovations to their teacher development reform programs.
- All partners will commit to sustainability by providing funding for released mentors,

collaborating in the delivery of high quality mentor and school leader professional development, and gathering and analyzing data of program impact.

Outcomes: The outcomes of our proposed program will be:

- By increasing student achievement in high-need school populations, the project will effectively narrow the achievement gap.
- Higher levels of student achievement will result in student populations that are better prepared for post-secondary education and rewarding careers.
- Through NTC's work with mentors to enhance their ability to accelerate the learning of adults, a strong pool of teacher leaders and potential new principals will be created that will permanently reside in the district.

Strategy to Support Goals and Objectives: NTC's program is driven by the goals delineated above and is designed to meet the objectives. It is intended to respond to the critical need to increase the number of effective teachers and retain them in the schools where they are most needed. We have chosen to address this important issue because the quality of a child's teacher is the most important school-based factor in determining how much that child learns.² Current data indicates that too many teachers are not effective, particularly teachers serving poor and minority students.³ The 175,000 new teachers hired each year in the United States disproportionately serve poor and minority students; too often, they lack the support and strategies they need to succeed. Moreover, 50 percent leave the profession within five years⁴. High-poverty schools have an average annual turnover rate of 20 percent; low-poverty schools turn over only 12.9 percent of teachers per year.⁵ This situation contributes to the well-documented achievement gap and the program we propose is aimed at reducing that disparity by ensuring that new teachers in

high-needs schools become highly effective as well as committed to the profession long-term.

A Sharp Focus on Teacher Effectiveness. In all its programs and with each of its partner LEAs, NTC focuses on *increasing teacher effectiveness*—well established as the single most important school-based factor in accelerating student learning in high-need LEAs. NTC’s 14 years of data, research, and experience will be brought to bear to assure that the program results in student achievement and teacher retention correspond with those of dozens of highly effective NTC programs that are in place across the country. As discussed in Section B and Appendices C and D, research indicates that the students of teachers who have had the benefit of two years of NTC’s intensive, full-release induction and mentoring model show increased levels of achievement when compared with students of teachers who lacked that support.

The Program. NTC will work with its LEA partners to design and carry out a high-quality mentoring and induction program that will replicate and validate these important results. The program to be implemented will include professional development for beginning teachers, mentors, and school leaders; professional learning communities for mentors; online content-focused mentoring via [REDACTED] for beginning math, science and special education teachers; access to the [REDACTED] site which includes online formative assessment tools for new teachers, mentors, and program leaders; and technical assistance and capacity building for LEA program leaders to ensure effective replication of its proven comprehensive induction model. These efforts will result in a corps of effective new teachers who are committed to remaining in their districts and who have the skills to improve student achievement throughout their careers.

Defining and Evaluating Effective Teaching. The three partner LEAs, two of them from RTTT-winning states, are at the leading edge of a new era in public education. This era is shaped by two important factors: research that defines the elements comprising genuine teacher

effectiveness and multi-faceted teacher evaluations that are aligned with that research. Moreover, the partner LEAs have adopted the teaching and learning standards of the Common Core Initiative. We salute this careful attention to teaching quality and content, but note that strict evaluation and content standards in themselves will not produce quality instruction—that is what a thorough, formative induction and mentoring program is designed to do. The [REDACTED] [REDACTED] and the professional development that we implement collaboratively with the LEAs supports the success of these new evaluation procedures and content standards in a two-year program that is both systematic and supportive. A program that increases teacher effectiveness in light of evaluation and content standards is the keystone of an initiative of increased expectations for teachers and students.

Community of Practice. In support of Goal 4, NTC and its LEA partners will develop an action plan with specific aims—aligned to this project’s goals and objectives—supporting each LEA’s intention to implement, expand and sustain their induction programs and promote comprehensive teacher effectiveness reform. In addition, the LEA partners will participate in the NTC National Teacher Induction Network (NTIN). This participation will provide a virtual as well as a physical community of practice among the partner LEAs and 23 other NTIN member districts with well-established induction programs. This venue allows the LEAs to showcase their strengths and share strategies that support key elements of teacher effectiveness. As teams, the partner LEAs will meet with other LEAs committed to high-quality induction programs to consider the implications of program practices and articulate steps towards program goals. Our LEA partners will build relationships in a community of committed providers of high-quality induction, and share their strategies for increasing program effectiveness and measuring impact.

Self-Sustaining LEA Programs. NTC will also provide direct technical assistance to our

partner LEAs on implementing the induction and mentoring model within their own contexts. Locally delivered and tailored professional development including Mentor Academies and Mentor Forums are presented by NTC in collaboration with the LEAs. This collaboration has the aim of certifying the LEAs to conduct many of these events on their own at the end of three years. Additionally, after NTC helps initiate the data gathering and analysis that is required to assess program quality with rigor, the LEAs will also be prepared to continue that process independently. NTC also works with the LEAs to advocate effectively with their school boards and other stakeholders for continued investment in high quality induction programs. NTC provides support in writing project reports and press releases, as well as grant proposals and briefings for potential funders who are in positions to assist with continued program funding.

Digital Technology. From the start of the partnership with these three LEAs, NTC will provide a dedicated portal into [REDACTED], a rich online site. This resource will also support the LEAs' growing capacity to implement the program independently and sustain it at a high level. The [REDACTED] provides online mentoring tools including the [REDACTED] an opportunity for mentors and teachers to participate in an online community of practice, a process by which teachers and mentors can upload and annotate videos of teacher practice, lesson plans for beginning teachers, and, for some participants, access to [REDACTED] online mentoring for math, science and special education. NTC's leadership in the use of technology to support quality induction programs is discussed in more detail in Competitive Preference 10.

Building Bridges. NTC's strategy relies on its long-standing ability to build bridges among the stakeholders that play a role in improving teacher effectiveness, including LEA leadership, teacher unions, and funders. NTC's proposal is strongly supported by its LEA partners as well as the National Education Association (see letters of support). NTC's strong

model and strength of leadership will ensure it achieves its goals and objectives.

Activities: NTC and its partners, Broward County Public Schools, Chicago Public Schools, and Grant Wood Area Education Agency (GWAEA) have devised a program of activities that are aligned with its goals and support its strategy.

Fully Released Highly Trained Mentors. NTC’s approach is a huge departure from the often-unfunded “buddy” mentoring that is commonly applied in school districts today. Mentors, selected from the best of the best teachers in the LEAs, are highly trained using a research-based, structured methodology for reinforcing the strengths and bolstering the weaknesses of their assigned beginning teachers. The mentors are fully released from classroom duties in order to dedicate themselves to the tasks of observing and supporting their new teachers in weekly one-to-one meetings. The mentors’ work is aligned with state-adopted Common Core Standards and driven by the expectations that are expressed in the LEAs’ teacher evaluation systems.

Implementation Support Provided by NTC to LEA Partners. Implementation of the model begins with a pre-assessment of the LEA’s human capital continuum. Special focus is placed on new teacher placement practices, current teacher retention rates, and assessment of district resources that can support full release mentoring including a collaborative appraisal of the district’s current use of fulltime professional support staff such as under-utilized instructional or content coaches. We provide an analysis of existing principal and new teacher professional development and of school-level conditions for teacher and leadership development (using NTC’s highly respected Teaching, Empowering, Leading and Learning survey [TELL] when possible). With our LEA partners, we emphasize reviewing programs and resources with an eye to maximum effect on learning per dollar invested. This thorough pre-assessment allows NTC and participating LEAs to collaboratively customize the program and support the development of

the local expertise required to sustain a teacher induction and mentoring program as part of long-term efforts to maximize student achievement.

Mentor Selection and Training. Next, NTC works with LEAs to select and develop the skills of mentors whose primary objective is to increase the instructional effectiveness of new teachers during their first two years in the profession. NTC sets high standards for instructional mentor performance; it will work with program leaders to implement a rigorous process to identify, recruit, develop, and retain candidates from among the most effective teachers in the LEAs. Successful mentor candidates begin receiving intensive professional development by means of a three-year program of NTC Mentor Academies and bi-monthly Mentor Forums.

The **Mentor Academy Series** is a sequenced curriculum of mentor professional development that supports mentors through the development of comprehensive mentoring knowledge and skills using the [REDACTED] while building a community of learners who support each other's growth as professional mentors. Each Academy session has a specific focus in order to gradually build the learning and development of the mentors' capabilities in support of new teachers. The Academies also promote the collection and analysis of field-based data of teacher practice. The Academy series consists of four, three-day sessions during both Years 1 and 2, followed by three, two-day sessions in Year 3

Through their participation in ongoing professional development at regular **Mentor Forums**, mentors continue to expand their skills and knowledge of best practices for teacher development. These facilitated forums: 1) create a collaborative community of practice for mentors, supporting each mentor's emerging leadership; 2) deepen mentor skills and advance a high standard of program implementation; 3) provide for mentor accountability in a supportive environment; and 4) encourage sharing and analysis of data which tracks program impact and

determine whether planning and differentiated instruction had an impact on this group of learners. Within the [REDACTED] and supported through professional development, NTC provides a variety of research-based and customized materials that support development strategies, such as data collection tools, student work protocols, and templates for differentiated lessons.

Mentor Assessment and Leadership. Instructional mentors engage in a parallel formative assessment of their own growing skills using a continuum of mentor development based on a set of professional standards, a goal-setting process (with mid-year review and end-of-year reflections), a peer coaching process, and data collection. After approximately three years, mentors will have grown enormously, having gained the expertise to return to the classroom as more highly effective teachers or accept a leadership position in their LEAs. Historically, about 17 percent of mentor alums become school principals.

Supporting Principals. NTC recognizes the essential role that support from administrators plays in teacher effectiveness and retention,⁶ and works to expand the capacity of principals to support new teachers. NTC works with principals using formative supervision practices and research-based tools and protocols that are aligned with the locally adopted evaluation framework and designed to support principals in providing evidence-based feedback that enhances teacher growth. The Professional Development modules “Improving Student Achievement Through Teacher Observation and Feedback” and “The Role of the Principal in Supporting High-Quality Teacher Induction” will be presented, aimed at energizing principals in improving teacher practice through observation and coaching. This builds permanent leadership capacity within the LEA and establishes collaboration between new and experienced teachers.

NTC Eligibility: NTC meets the eligibility requirements for a nonprofit organization based on its track record of working with LEAs to improve student achievement. NTC’s record of

significantly improving student achievement is presented in detail in Appendix C.

One study demonstrates higher reading gains on the Stanford Achievement Test (SAT9) for students of teachers in one California LEA that had the benefit of two years of intensive mentoring based on the NTC model, compared with teachers in other LEAs that offered intensive mentoring for only the first year. Researchers compared reading scores for 271 new teachers in this LEA (all of whom had two years of intensive mentoring in the NTC model) over five years. Although the new teachers were more likely to be assigned to underachieving classes, 68 percent of the new teachers' classes showed reading gains that were above the LEA average gain. High-quality mentoring produced more-effective new teachers⁷.

NTC will replicate these results in this project. **LEA demographic** details are as follows:

	Grant Wood AEA	Broward County	Chicago PS
# Students	66,135	256,872	404,151
% non-white Students	15%	49%	91%
% Free and Reduced Lunch	29%	53%	84%
# Schools	167	298	675
# Teachers	4,798	15,870	21,320
# Year 1 and 2 Teachers	351	660	1,400
% Beginning Teachers	7.3%	24%	15.2%

Matching Requirement. In addition, NTC is confident of meeting the 10 percent

matching requirement. It has a strong history of raising funds from a variety of private funders. Over the past several years, major foundations such as the Ford Foundation, the William and Flora Hewlett Foundation, the Carnegie Corporation, the Rockefeller Foundation, MetLife Foundation, and the Bill and Melinda Gates Foundation have all supported NTC's work.

A2. Planning for LEA Partner Program Ownership.

The process of implementing a high-quality induction program is designed to be intensely collaborative because it assumes from the outset the gradual reduction of NTC's role in the process. Once the shared program vision, strategies, and implementation are inculcated at the LEA partner level, NTC's role can be greatly reduced.

Enriching the Leadership Pool. While working with their assigned new teachers, participating in NTC Mentor Academies 12 days per year, and attending NTC-facilitated Mentor Forums twice per month, the mentors continue to be employees of their districts. Their growing expertise becomes part of an enriched pool of LEA human capital. Whether they return to their classrooms with enhanced skills or accept leadership positions in their LEAs, mentor alums continue to represent the values and strategies of the program within their schools and LEAs.

Collaborative Implementation. There are additional ways in which the LEAs gradually take ownership of the induction program. As stated above, the program is designed to certify the LEAs in offering high-quality professional development, promoting the sustainability of their teacher induction programs with minimized NTC support. To ensure this, NTC and the partner LEAs collaboratively implement a program-level formative assessment system that includes program standards and a continuum, allowing LEAs to monitor program implementation. Ongoing professional development for principals and LEA administrators is created in concert

with the LEAs and reflects the LEAs' assessed needs. Researchers have found that this collaborative process is key to the evolution of a shared vision and direction among all participants, an indicator of effective induction programs.⁸

Transfer of Program Leadership. The gradual transfer of responsibility for program implementation from NTC to the partner LEAs has the dual virtue of increasing the strength of induction leadership at the local level and decreasing program implementation costs by reducing NTC's participation. Our LEA partners in this proposal joined this partnership because, at their highest levels, there was strong support for the program and a wish to grow it and own it. They have committed to program expansion and sustainability and the proposal allows several years to plan for it. Each of our partner LEAs have agreed that they will be prepared to sustain program costs once the grant funding ends in light of their conviction that this cost-effective model will improve teacher effectiveness, raise student achievement, and aid in reducing the financial drain that teacher turnover creates. (A 2007 analysis of Chicago Public Schools deemed the cost of recruiting and preparing a replacement for each teacher who left the classroom at \$17,872).⁹

Ensuring the Program's Place in NTC's Ongoing Work: There can be little doubt that NTC will continue to further its primary organizational mission of promoting student achievement and creating effective new teachers by means of teacher induction and mentoring programs. Last year NTC provided induction programs and/or professional development services in 31 states and it is receiving increasing national recognition as well as funding from prestigious foundations such as the Bill and Melinda Gates Foundation. Our organization is well-established, financially solvent, and employs a full-time staff of 113.

A3. Reasonability of costs in relation to project objectives, design, and significance.

Our program is aimed at the very heart of educational improvement; our research proves that our work makes *new teachers become better teachers* and that that progress is reflected in student performance. Participating teachers will learn instructional skills that will remain with them throughout their careers and affect each of their students in every future year. Not only are we creating better teachers for high-need schools, but these teachers have higher than average rates of retention. What better value for money could be proposed than career-long improvement in teacher effectiveness, particularly in light of the national emphasis on improved teaching?

Far-Reaching Effects. In our budget, mentors' salaries are the largest cost element by far and their effect on student learning is far reaching. Each mentor works closely with 15 beginning teachers per year, each of whom brings the benefit of that mentoring to their entire class of students (class size estimated at 23 for elementary and 125 for secondary). Moreover, our program provides powerful professional development to the principals who have influence over veteran as well as new teachers and strongly influence the overall school learning climate.

A Program That Pays For Itself in Savings. We can establish that these total program costs and cost per student are reasonable in light of the costs of other, less broadly powerful, programs. More importantly, our research indicates that over time the program literally more than pays for itself in cost savings. A 2007 cost-benefit analysis that monetized increased teacher effectiveness and examined savings from reduced teacher turnover found that every \$1.00 invested in a comprehensive induction program produces a return of \$1.66 after five years¹⁰. The benefit from investing in teacher induction lies in large part in the acceleration of teacher impact on student achievement and savings from increased teacher retention.

A4: NTC's estimate of the cost of the program

The proposed project budget is \$16,362,402 million over five years, including \$1,680,198 for the evaluation. As discussed in Section C3, according to conservative estimates, the participating new teachers from the three partner LEAs combined will affect 164,000 students over the grant period. \$16,362,402 million divided by an estimated 164,000 students affected during life of the grant equals \$100 program cost per student. (It should be noted that the budget total referenced above includes \$1,680,198 million for evaluation and 10% for indirect costs. Removing those non-program costs yields a pure program cost of \$80 per student.)

Start-Up Costs: \$1,061,870 in start-up costs will be incurred primarily in Year 1. These include: pre-assessment work and planning for the length of the grant, collection of baseline data, alignment of IT systems in the LEAs, and establishment of the communities of practice.

Operating Costs: Expenditures for Years 2–4 are those directly applicable to delivering the new teacher effectiveness programs in the LEAs. The amount is \$15,110,491.

Evaluation Wrap-Up: In Year 5 no program delivery is planned. The budget of \$190,042 provides for collection and analysis of student test scores that will become available in the fall of 2016, followed by the final evaluation of student achievement and preparation of the final report

Scale-Up: To reach additional students, the costs are: \$164 per student to reach 100,000 students; \$65 per student to reach 250,000 students; and \$33 per student to reach 500,000 students.

B. Significance

B1. The extent to which the project represents an exceptional approach to the priority.

Although “induction programs” and even “mentoring of new teachers” are commonly used phrases in educational circles, there is very little research of consequence indicating any positive effect on student achievement or teacher retention from the familiar district-led “buddy” programs for new teachers. These programs typically provide neither release time nor ongoing training for mentors. Most of these district-led induction programs are poorly funded, much too short in duration, and not based on sound educational research. Thus, although induction and mentoring are not new concepts, a two-year rigorous and research-based program with proven results is exceptional indeed.

Exceptional Aspects of the Model. NTC’s exceptional induction model focuses on the development of highly-trained full-release mentors chosen from within the LEAs and who will remain in the LEAs during and after the project. Their sole charge is to accelerate new teacher practice by using formative assessment processes that guide the mentor’s individually tailored support and guidance, focusing on each beginning teacher’s stage of development. The content of NTC’s Mentor Academies and bi-monthly Mentor Forums ensures that LEA mentors are knowledgeable of critical elements in local educational reform. Moreover, NTC’s formative assessment system assures a focus on issues related to English language development and the achievement of students from traditionally underperforming and underserved populations. An initiative to accelerate the development of adult professionals is extremely challenging, as schools and businesses have long observed. A long term research-based program to develop mentoring skills that accomplish that task among educators is unique to NTC’s program.

Proven Results of the Program. NTC is aware of no other induction program in the US educational arena that is of the duration and quality required to produce the kinds of results in student achievement and teacher retention that our program has produced. The DOE-funded

study conducted by Mathematica Research¹¹ and discussed in Appendix D corresponds in its findings with other research indicating that less than a full two-year program with full release mentors will not produce the desired results on teacher effectiveness and student achievement. Appendix D also refers to a study conducted in Boston that found that full-release mentors were linked to higher student achievement gains than part-released mentors. These facets of the NTC model are critical to meaningful results and are unique to our program.

B2. Reflecting up-to-date knowledge from research and effective practice.

NTC is the national leader in teacher induction and mentoring, a program critical to ensuring an effective teacher in every classroom. NTC's program is driven by research showing that a teacher's relative effectiveness has a greater influence on student achievement than any other school-based variable, even if the students are disadvantaged and taught in large classes.¹² Furthermore, research in adult learning indicates that a mentoring model such as NTC's has the best chance of permanently affecting teacher behavior. One study concluded that there is a 90 percent chance that adult learners will transfer a new skill into practice as a result of the combination of theory, demonstration, practice, and feedback that is experienced during in-situation coaching or mentoring. The study contrasted this with a 5 percent chance that the learners will transfer a skill into practice as a result of simply learning a theory.¹³ Comprehensive professional development and mentoring make a decisive contribution to the effective transfer of teaching skills to new teachers and, as a result, to student achievement.

Importance of Retention. Recent studies have found that the shortage of STEM teachers as well as the shortage of minority teachers is related, not to a shortage of qualified graduates, but to the low retention rates of these critically important subject matter experts and role

models.¹⁴ High-quality mentoring by trained professionals has been shown to reduce troublesome teacher turnover while raising the quality of a new teacher's instructional practice.¹⁵ A 2007 study by the University of Chicago of a mentoring project in Chicago Public Schools of which NTC was the primary service provider showed that with strong mentoring and support, teachers' intent to remain in teaching rose from 49% to 70% at the elementary level and 38% to 82 % at the high school level¹⁶. That enhancement in teacher capacity, as well as growth in teachers' commitment to the profession, translates directly into increased student achievement.

Research discussed in Appendix D indicates that high-quality induction and mentoring programs have a substantial positive effect on student achievement and teacher retention. These two outcomes—accelerating the development of effective teachers leading to an increase in student achievement and retaining teachers in their districts and in the profession—will ensure that high-need school districts acquire a new generation of effective teachers.

B3. Importance and magnitude of the effect expected to be obtained from the project.

Research and experience indicate that beginning teachers struggle significantly in their first years of teaching. New teacher turnover creates a revolving door of novice teachers that most affects the neediest children in high-need schools. This situation, an important contributor to the persistent achievement gap in the US, is tackled head-on and with proven effectiveness by the program we propose. The growth in student achievement and new teacher retention that this program is designed to achieve (see Section A1) speaks to the confidence with which we predict successful implementation and significant outcomes in teacher practice and student learning.

We propose a well-designed experimental evaluation of the project as discussed in Section D. This study will demonstrate that teachers who participate in a high-quality induction

and mentoring program in their first two years develop effective teaching skills at a faster rate than new teachers who do not have mentors and that these more effective teachers accelerate student learning measurably. It will also establish that turnover of participating teachers is lower than that of non-participants. The proposed evaluation will have more controls than some previous evaluations; the results are expected to have strong internal and external validity.

Through ongoing longitudinal research and evaluation, the NTC model will demonstrate that having high-quality mentoring support can make the difference between a slow, possibly discouraging, learning curve and a fast track to teacher confidence and effectiveness in the classroom.

C. Quality of Management Plan and Personnel

C1. Management Plan.

NTC has gone from managing a handful of induction and mentoring engagements in 1998 to managing over 300 per year in 2011. It has been called the “gold standard” of induction programs by the *Chronicle of Higher Education*.¹⁷ It has done these things by being well managed and by delivering excellent work on time and on budget—and it will continue to do so. The strength of CEO Ellen Moir and senior staff can be seen in the resumes in Appendix F.

14 Year Track Record. NTC has a successful track record of implementing and scaling large and effective programs by overcoming a variety of challenges. At both the state and national levels, NTC has received recognition for its highly effective and complex projects. Over the past 14 years, NTC has successfully demonstrated the ability to expand the program’s reach, growing from supporting 1,000 new teachers in 1998 to 24,000 in 2010-2011. NTC also links partners from diverse geographic areas together into communities of practice. One example

is the National Teacher Induction Network, an existing community of practice made up of 23 LEA leadership teams from across the country that meet twice a year to focus on dissemination of innovations and best practices related to program implementation.

Management Structures. The organization has created a new management structure specifically dedicated to scaling-up this teacher induction program if a federal grant is awarded. The NTC i3 Grant Oversight Council will manage the implementation of the initiative and will be directed by NTC Chief Program and Partnerships Officer Janet Gless. The Oversight Council is designed to provide supervision of the entire NTC i3 program and strategic support to all components and partners in the project. The primary focus of the Oversight Council is to meet the goals and objectives of the i3 grant, managing the initiative with fidelity to the aims and requirements of the U.S. Department of Education and those of its LEA partners, and moving forward in a timely and fiscally responsive manner.

An i3 Strategy Council will be formed to deal with issues of contextualization and program implementation. It will include the i3 Project Director, i3 Senior Program Manager, NTC site leads for each of the 3 LEAs, and representatives from our external evaluator, SRI International, and each partner LEA. The Strategy Council will meet on a monthly basis, usually online or by teleconference, and will highlight emerging innovations that can accelerate implementation across programs and address issues impeding the successful implementation of the NTC teacher induction program in schools.

Responsibilities:

- **Project Director** oversees the strategic implementation of the work and manages the staff doing the work of implementing the project. The Project Director works with LEAs on scope and services, and implementation issues. She co-facilitates the community of practice. This

position convenes and leads the Strategy Council and has ultimate responsibility and authority over the project.

- **Director of Oversight Council** convenes and leads the Oversight Council and provides organizational management support to the Project Director.
- The **Project CFO** oversees the business and operations aspects of the project, administers the funds that are passed through to the LEAs and manages the relationship with DoE.
- **Director of Impact** conducts internal program evaluation and oversees LEA impact data analysis process and personnel. The DOI is the liaison with the SRI International evaluators.
- **Evaluation Co-PI's** oversee the external evaluation, monitor detailed work plans and budgets related to the external evaluation, present detailed analysis of program efficacy.
- **Senior Program Manager** ensures that the program is implemented with fidelity, manages timeline and deliverables, provides support to implementation staff, and co-ordinates implementation activities.
- **NTC Site Leads** provide technical assistance, deliver much of the PD, and support program implementation and fidelity

Timeline and Milestones: A more detailed timeline with milestones is included in Appendix J.

Activities	Staff	Planning		Program			Evaluation		
		Wntr 13	Spr/ Su m 13	Fal l 13- 15	Wntr 13- 16	Spr/ Sum 14-16	Fall 16	Wntr 16-17	Sp r 17
LEA Capacity Building									
Project Goals*	PD	X				X			
:LEA Technical Assistance*	PD, SL	X	X	X	X	X			

LEAs attend NTC capacity building events*	LEA		X	X		X			
Mentor Roles and Responsibilities									
Recruit, select and match mentors with teachers	PD, LEA		X			X			
Program Assessment, Evaluation, and Accountability									
Program data collection	SPM, SRI, ID, LEA		X	X	X	X	X	X	
Program Reporting *	SRI, ID, LEAs					X			X
Mentor/ Principal PD									
Mentor PD	SL, LEAs			X	X	X			
Mentor Forums	SL, LEAs			X	X	X			
Principal PD	SL, LEAs			X	X	X			
Content Development/ Alignment									
Common core and School Leadership alignments	SPM, SL	X	X	X	X	X			
Implement	OLD, PD, SPM,				X				

	LEAs								
Implement ██████████	OLD, PD, SPM, LEAs			X					
Grant Oversight									
i3 Strategy Council meets*	PD, SPM, SL, LEAs, ID		X	X	X	X			
i3 Oversight Council meets*	CPPO, PD, SPM CFO, ID, SRI	X	X	X	X	X	X		

Tasks Related to Sustainability and Scalability of the Project: Tasks related to the LEA’s readiness to implement, sustain and expand a high-quality induction program are delineated in the timeline above and are marked with an asterisk. The responsible parties are identified.

C2. Qualifications of Key Project Personnel.

NTC and its partners bring a wealth of expertise in education and have a dedicated group of educational leaders and managers to execute its i3 project. The i3 management team has proven their ability to manage a series of complex educational projects and programs. Under the leadership and vision of a highly dedicated CEO, Ellen Moir, whose resume is attached, NTC is confident in its ability to manage the complexities of the Validation grant.

- The **Project Director** will be NTC Senior Vice President Cynthia Brunswick PhD who has

implemented NTC's six-year partnership with Chicago Public Schools (CPS). She also oversees NTC's work in high profile LEAs such as Hillsborough County Public Schools (FL), Rhode Island Department of Education, and Tulsa Public Schools (OK).

- The **Director of the Oversight Council** will be NTC's Chief Program and Partnership Officer, Janet Gless (MAT). A co-founder of NTC, she oversees all national and international programming.
- The **Project CFO** will be NTC's Chief Financial Officer, Sue Perkins (MBA) who has held senior executive positions in non-profit and for-profit companies for more than 25 years.
- The **Director of Impact** will be Srik Gopalakrishnan (MBA), NTC's Chief Impact and Learning Officer, who as Director of Evaluation for the Ball Foundation worked to create whole systems change in public education before joining NTC in 2010.
- The **Evaluation Co-Principal Investigators (PI)** will be Drs. Haiwen Wang and Marjorie Wechsler of SRI International. Dr. Wang designed and executed the Random Controlled Trial for the Florida Master Teacher Initiative for which Dr. Wechsler is PI.
- **NTC Site Leaders** will be Thomas Howe for GWAEA, Sharon Grady for Chicago, and Mimi Appel for Broward County. Each brings multiple years of experience in teacher development and leadership of complex projects, as their enclosed resumes will attest.
- A highly-qualified **Senior Program Manager** will be hired upon notice of the award.

C3. Capacity to expand project on state or regional scale during or after the project ends.

NTC already has the experience, financial resources, and staff required to scale-up. Revenues for fiscal year 2012 are projected at \$20 million with a positive cash balance at year end. The organization provided services (induction, mentoring, and school leadership

programming) in over 30 states during 2010-2011. NTC has 189 employees, 113 of whom are full time, with offices in five states. The organization is widely recognized for its long-running work in places as diverse as Austin, Texas, Boston, MA, and the state of Alaska. The fact that NTC served 7,500 mentors and 24,000 new teachers in 2010-2011 is testimony to the organization's readiness to scale even further.

Students Affected. It is expected that, over five years, NTC and its three partners will reach 2,475 new teachers and approximately 164,000 high-need students through the teacher induction programs. (Multiplying the number of mentors by their annual new teacher load, by the teachers' total student loads would indicate that 234,160 students are affected. That number was decreased by 30 percent to avoid double-counting students who may have a new teacher more than once, yielding a very conservative figure of 164,000 affected students.) The "students affected" number is even higher if one counts the students affected when mentors return to their classrooms after about three years as more highly effective teachers.

High-Need and Diverse Partner LEAs. NTC's partner LEAs were purposely chosen in light of their student populations which include large numbers of high-needs students, as well as their regional diversity (including both urban and rural LEAs), program readiness, and current teacher effectiveness measures. Not only will the grant affect at least 164,000 students, but because the LEAs represent Florida, Illinois, and Iowa, the teacher induction and mentoring model will receive prominent exposure in multiple important U.S. regions over the grant term. As the success and significance of the treatment gain traction and attention in the LEAs' states, it is anticipated that neighboring LEAs will also become interested.

D. Quality of the Project Evaluation

SRI will conduct a rigorous evaluation that will document the extent of implementation in partner sites and identify the impact of the NTC treatment on new teachers and their students. The evaluation will employ two designs to account for differences in baseline conditions and program rollout plans across the three partner sites. In two sites—Broward County and GWAEA—the evaluation will feature a randomized controlled trial (RCT) using clustered random assignment to assign schools within sites to the full NTC induction model or to the site’s status quo induction practices. The study will follow two cohorts of new teachers through 2 years of induction each. In Chicago, where the district has a broad set of induction strategies in place and will be serving all first- and second-year teachers during NTC’s implementation of its 2-year model in the district, the evaluation will use a difference-in-differences approach. This approach will estimate the difference between served and unserved new teachers in two different years, while adjusting for differences among veteran teachers in those years.

Implementation measures will come from online mentor logs, annual teacher and mentor surveys, and site visits. Teacher outcomes will derive from classroom observations, teacher surveys, and HR data from partner sites. Student outcomes will be drawn from district data sets.

Evaluation questions and logic model: Exhibit 1 (see Appendix J) illustrates the model driving the evaluation. It reflects the research design process, examining first the effects of NTC treatment on student outcomes and second the mechanisms associated with any effects. The evaluation will address the following impact, exploratory, and implementation questions: Impact questions. (1) Does participating in the full NTC induction model result in better teaching practices in the domains of classroom environment and instruction? (2) Does participating in the full NTC induction model result in improved student achievement in reading and math?

Exploratory questions. (1) Is effective instruction related to student achievement, potentially mediating the NTC effect on student outcomes? (2) Among NTC-served teachers, are higher levels of mentoring (e.g., in terms of frequency and instructional focus) related to more effective instruction and higher student achievement? Implementation questions. (1) What is the level of fidelity to the NTC model in the three partner sites? (2) To what extent and in what ways does implementation differ within and across schools?

Sampling for the RCTs: SRI will assign all schools employing new teachers in Broward County and GWAEA to either the treatment (50%) or control (50%) group. SRI proposes using this cluster random assignment instead of individual teacher assignment because of the threat of treatment contamination within schools. In 2013–14 and 2014–15, SRI will track a cohort of all new teachers in both the treatment and control schools. In 2014–15 and 2015–16, SRI will track a second cohort of all new teachers in treatment and control schools. All new teachers in treatment and control schools will be included in surveys and teacher outcomes analyses. New teachers in treatment and control schools who teach reading and math in grades 3 through 8 will be included in student achievement analyses. For classroom observation, SRI will randomly sample 65 treatment and 65 control teachers for each of the two cohorts in Broward, and 40 treatment and 40 control teachers for each of the two cohorts in GWAEA. All observed teachers will be second-year teachers teaching reading or math in grades 3 through 8. Aggregating the two cohorts of new teachers for each of these sites will increase overall sample size.

Sampling for the difference-in-differences: In 2012–13, SRI will track teacher and student outcomes for (1) CPS teachers in their second year of teaching *who did not receive mentoring* in their first or second year of teaching¹⁸ and (2) veteran teachers in the same grades, subjects, and schools as the second-year teachers. NTC will serve its first cohort of new CPS

teachers in 2012–13; these teachers will receive a second year of NTC support in 2013–14. Thus, in 2013–14, SRI will track teacher and student outcomes for (1) *NTC-served teachers* in their second year of teaching and (2) veteran teachers in the same grades, subjects, and schools as the NTC-served second-year teachers. To facilitate student outcomes analysis, the sample in both years for all groups will include only teachers of reading and math in grades 3 through 8. For classroom observations, SRI will randomly sample 65 new teachers from the treatment year and 65 new teachers from the control year.

Student outcome measures: To assess students’ achievement, SRI will collect annual student test score data linked to teachers, using scores from each district’s respective state standardized test (Iowa Test of Basic Skills, Illinois Standards Achievement Test, and Florida Comprehensive Assessment Test). Each of the states requires reading and math assessments in grades 3-8. For the RCT, the NTC effect will be analyzed for each cohort after both first and second years of teaching. SRI will collect historical student achievement data to establish equivalency between treatment and control schools and to control for students’ prior achievement (see below).

Teacher outcome measures: The evaluation will include two teacher outcome measures: classroom teaching and retention. SRI will conduct classroom observations for a sample of teachers receiving the NTC treatment and teachers in the control schools. Observations will use the Danielson framework¹⁹, an externally validated instrument that aligns well with the NTC model, and will focus on classroom environment and instruction. SRI will conduct one observation per teacher in the observation sample during the spring of their second year, close to the completion of the NTC teachers’ induction program. Observation scores will be used as an intermediate outcome measure and in association with teachers’ student achievement outcomes.

To analyze teacher retention, SRI will obtain HR data from partner sites to identify teachers in both treatment and control schools who return to their schools or districts the following year.

Implementation measures: Multiple data sources will allow researchers to monitor the quality of implementation, provide feedback to NTC, explore how specific program components might lead to changes in outcomes, and understand the “induction as usual” received by control teachers. The implementation measures map to the components of NTC’s Induction Model as seen in the Logic Model for Evaluation (Evaluation Exhibit 1, Appendix J).

SRI will use the NTC annual surveys of new teachers and mentors, coordinating with NTC to add validated items to replicate reliable scales. SRI also will administer the new teacher survey in control schools in Broward and GWAEA and to new teachers in CPS during the control year, providing gift cards to respondents to raise response rates. The teacher surveys will provide quantifiable data on induction practices in both NTC and control conditions (e.g., mentor or no mentor, frequency and intensity of mentor contact, nature of mentoring, what tools mentors use, etc.). The mentor survey will describe the nature of mentoring offered and whether supports for mentors were sufficient. An NTC-developed online mentor log will provide consistent data on frequency and nature of NTC mentoring across the three partner sites, including the number of mentor hours for each mentee and the number of NTC-designed tools mentor-mentee pairs complete. In addition, SRI will conduct interviews at the school and district levels to understand implementation context. In six schools per district, representing the range of schools with new teachers, SRI will interview mentors, mentees, and mentees’ principals to understand their perceived effects of the NTC induction model and factors supporting or hindering implementation. Interviews with site district administrators will illuminate local labor market

forces and district recruitment, hiring, induction, assignment, and evaluation policies as contexts within which the NTC model is being implemented.

Analysis of NTC effect on teacher outcomes: Teacher outcomes collected from classroom observations will be comparable across sites. Thus, researchers will pool data from all sites to conduct the impact analysis, positing a two-level hierarchical model with teacher and school levels. Some schools will have only one observed new teacher, and in Chicago a school may have both treatment and control teachers. The model is shown below:

$$y_{ij} = \beta_0 + \beta_1(\text{NTC}_{ij}) + \beta_k(\text{kth - teacher covariate}_{ij}) + \beta_l(\text{lth - school covariate}_j) + e_{ij} + r_j$$

where i is teachers, j is schools; Y_{ij} is a teacher outcome; NTC_{ij} equals 1 for teachers in schools assigned to NTC induction and 0 for control schools; e_{ij} and r_j are teacher and school random effects. β_l is the estimated impact of NTC induction on the teacher outcome. Assuming a total of 492 observed teachers, half treatment and half control, and assuming 15% of the variation in the outcomes is explained by teacher and school covariates, the analysis will be able to detect a minimum detectable effect size (MDES) of 0.21.

Analysis of NTC effect on student reading and math achievement in GWAEA and Broward: SRI will conduct test score analysis for new teachers teaching tested grades and subjects.²⁰ Because of the different state systems, researchers will conduct the separate analyses for reading and math. Researchers will standardize scores at each grade level and conduct analysis combining all tested grades (grades 3 through 8) based on the standardized test scores, while adjusting for grade-level effect. This analysis will involve positing a three-level hierarchical model with student, teacher, and school levels, with NTC induction effects estimated at the school level. The model is:

$$y_{ij} = \beta_0 + \beta_1(\text{NTC}_j) + \beta_m(\text{mth - student covariate}_{cij}) + \beta_k(\text{kth - teacher covariate}_{ij}) + \beta_l(\text{lth - school covariate}_j) + e_{cij} + r_{ij} + u_j$$

where c is students, i is teachers, j is schools; Y_{cij} is a student reading or math score; and e_{cij} and r_{ij} and u_j are teacher and school random effects. β_1 is the estimated impact of NTC induction on student achievement.

Analysis of NTC effect on student reading and math achievement in Chicago: SRI

will apply a difference-in-differences approach to study the NTC effect on student test scores.

Researchers will apply a three-level HLM model with student, teacher, and school levels.

Because the comparison teachers in 2012–13 for NTC teachers in 2013–14 may come from the same school, the NTC effect is estimated at the teacher level. The HLM is:

$$y_{ij} = \beta_0 + \beta_1(\text{New teacher}_{ij}) + \beta_2(\text{Treatment year}_{ij}) + \beta_3(\text{New teacher} * \text{Treatment year}_{ij}) \\ + \beta_m(\text{math-student covariate}_{cij}) + \beta_k(\text{kth-teacher covariate}_{ij}) + \beta_l(\text{lth-school covariate}_j) + e_{cij} + r_{ij} + u_j$$

where “Treatment year” indicates whether the student achievement outcome is taken from new and veteran teachers in 2013–14. β_3 is the estimated effect of NTC on the student test score.

The following power analysis assumes: an average of 20 students per teacher; that 10% of the variation in student test scores lies in each of the school and teacher levels; and that student pretest score and other covariates explain 50% of the between-school variation. The MDES for Broward is 0.15, assuming 220 grade 3-8 reading or math teachers in 150 schools. The MDES for GWAEA is 0.17, assuming 170 grade 3-8 reading or math teachers in 100 schools. The MDES for Chicago is 0.14, assuming 240 grade 3-8 reading or math teachers in 120 schools.

After student achievement analyses, SRI will further estimate an overall NTC effect on student achievement for all sites using a meta-analysis.

Mediation analysis: The researchers hypothesize that effective teaching may mediate NTC effects on student outcomes. To test this, SRI will examine whether improved instructional practice is related to improved student outcomes for teachers with observation data and student-teacher linked data.

Analysis of relationship between levels of mentoring and teacher and student

outcomes: SRI will include only teachers in treatment schools to investigate whether greater levels of mentoring lead to more effective instruction and student outcomes. SRI will apply the same models as presented in the impact analysis for new teachers who participated in the intervention, including mentoring frequency and quality indicators as predictors.

Implementation analysis: For implementation measures derived from the teacher and mentor surveys, factor analysis will describe induction for treatment and control teachers. To assess differences between the groups, SRI will conduct chi-square tests for categorical variables and ANOVA for continuous variables. For implementation measures from NTC online mentoring system, researchers will aggregate the data for each treatment teacher and report descriptive statistics, and will use the measures as predictors in analyzing the relationship between levels of mentoring and teacher and student outcomes (described above). The qualitative data will provide a more comprehensive understanding of the district and school contexts that affect teacher induction. Within each district, the interview data will be analyzed according to topics that help explain induction differences in treatment and control schools, such as the role of district HR policies (recruitment, hiring, induction, teacher assignment, evaluation); local labor market conditions (quality of applicant pool, shortages); school leader instructional support; teacher collaboration and community; instructional change/reform initiatives; mentor training/supports; nature of mentoring (frequency, topics, usefulness); and unmet induction needs. After within-district analysis, the research team will compare implementation themes across the three sites to generate themes for the overall NTC model implementation.

Reporting: Annual reports will integrate findings across data sources, addressing implementation, impact, and exploratory questions as appropriate during the study. SRI will also

provide informal formative feedback to NTC based on qualitative data gathered through observations and interviews. The final report will include impact findings on the effectiveness of the NTC induction model and implementation findings intended to facilitate model replication.

¹ Sciandra, J., Teacher Turnover & Career Choice Confidence in American Public Schools (Master's Thesis, Georgetown University, April 2007).

² Rivkin, S.G., Hanushek, E.A., and Kain, J., Teachers, Schools, and Academic Achievement (Econometrica, 2005) 73(2), 417–458.

³ Haycock, K. and Peske, H.G., Teaching Inequality How Poor and Minority Students Are Shortchanged on Teacher Quality (The Education Trust, June 2006)

⁴ Alliance for Excellent Education, What Keeps Good Teachers in the Classroom? Understanding and Reducing Teacher Turnover (Alliance for Excellent Education, February 2008)

⁵ *Ibid.*

⁶ Ingersoll, R.M., Why Do High-Poverty Schools Have Difficulty Staffing Their Classrooms with Qualified Teachers? (Center for American Progress, November 2004).

⁷ See Appendix C

⁸ Lai, E., Getting in Step to Improve the Quality of In-Service Teacher Learning through Mentoring (Professional Development in Education September 2010) v36 n3 p443-469

⁹ Barnes, G., Crowe, E., Schaefer, B. The Cost of Teacher Turnover in Three School Districts: A Pilot Study (National Commission on Teaching and America's Future 2007) p.73

¹⁰ Strong, M. and Villar, A. Is Mentoring Worth the Money? A Benefit-Cost Analysis and Five-Year Rate of Return of a Comprehensive Mentoring Program for Beginning Teachers (ERS Spectrum, Journal of Research and Information 2007).

¹¹ See Appendix D

¹² Hanushek, E.A., Kain, J.F., and Rivkin, S.G. New Evidence about Brown v. Board of Education: The Complex Effects of School Racial Composition on Achievement (Journal of Labor Economics, University of Chicago Press 2009) 27(3), 349–383.

¹³ Joyce, B. and Showers, B. Student achievement through staff development (3rd ed.) (Association for Supervision and Curriculum Development 2002)

¹⁴ Ingersoll, Richard M., Beginning Teacher Induction What the Data Tell Us (Phi Delta Kappan Magazine 2012) 93(8), 47-51.)

¹⁵ Strong, M. & St. John, L. A study of teacher retention: The effects of mentoring for beginning teachers. (Research Working Paper, #3, New Teacher Center, UC Santa Cruz, 2001).

¹⁶ Easton, J., Kapadia, K., Coca, V. Keeping New Teachers: A First Look at the Influences of Induction in the Chicago Public Schools (Consortium on Chicago School Research at the University of Chicago, 2007)

¹⁷ Basinger, J. Teacher education extends its reach (Chronicle of Higher Education May 2000), p. A18.

¹⁸ Some of the second-year teachers in 2012-13 will not have received any mentoring in their first or second year of teaching. All other new teachers in Chicago will receive mentoring during the study.

¹⁹ Danielson, C. The Framework for Teaching Evaluation Instrument (The Danielson Group 2001)

²⁰ Researchers will determine if teacher outcomes on the survey differ for teachers in untested grades and subjects from those in tested grades.