## **Rural LIFE: Literacy Initiative Focused on Effectiveness**

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## References

## Introduction

The Niswonger Foundation (NF) submits this proposal to the U.S. Department of Education for a mid-phase grant award under the Educational Innovation and Research competition (EIR). NF proposes to validate the use of personalized learning strategies focused on literacy in a group of schools and local education agencies (LEAs) in a rural region of Northeast Tennessee to improve academic achievement for students in grades 6-8.

NF was established in 2001 to make a positive and sustainable difference in education in Northeast Tennessee. Local and national partners have affirmed successes of the NF.

Tennessee's SCORE calls NF "an established leader in positive results for Tennessee students," and the Rural School and Community Trust says that NF "has a strong record of success in using collaborative approaches to implementing new learning strategies across rural districts and schools (See Appendix G)." In 2010, NF received an i3 validation grant to improve high school students' preparation for college and careers. The 2010 grant funded the successful validation of programs that increased access to college counseling and educational technology and expanded dual enrollment, distance learning, and online and advanced placement course offerings in high schools.

NF's proposed **Rural LIFE: Literacy Initiative Focused on Effectiveness** project will build on the success of its previous validation grant and improve teacher effectiveness and student achievement in grades 6-8 by: (1) adopting personalized learning strategies that meet the needs of all students and provide them with the knowledge and skills needed for success in high school, college and careers; (2) providing teachers with support for personalized learning strategies focused on literacy from lead teachers, academic coaches, classroom laboratories and other professional development activities; (3) establishing a shared services network (SSN) that supports continuous improvement and leverages economies of scale to support schools and LEAs with integration of personalized learning instructional strategies with Tennessee standards; (4) curating standards-aligned instructional materials for teacher development and student

enrichment and (5) providing teachers with formative assessment and data tools that they can use to improve their instruction and monitor student progress.

Figure 1 shows how these project resources and activities will lead to changes in practice and improved outcomes for teachers and students.

Figure 1: Logic Model for Rural LIFE

Resources	Activities	Outputs	Outcomes
<ul> <li>Personalized learning models</li> <li>Lead teachers</li> <li>Regional/shared supports:         <ul> <li>Implementation guidance</li> <li>Coaching</li> <li>Classroom laboratories</li> <li>Professional development</li> <li>Technology supports</li> <li>Online resources</li> <li>Standardsaligned materials</li> <li>Formative assessments</li> </ul> </li> </ul>	<ul> <li>Select and implement personalized learning strategies</li> <li>Access supports and professional development</li> <li>Collect data on implementation progress and educator supports</li> </ul>	<ul> <li>Effective implementation of standards and assessments</li> <li>Schools implement high quality personalized learning models with fidelity</li> <li>Student engagement and ownership</li> <li>Increased capacity for educators to analyze student achievement data</li> <li>Continuous improvement of implementation and supports</li> </ul>	<ul> <li>Increased student achievement</li> <li>Improved teacher effectiveness</li> <li>Replicability</li> <li>Notable contributions to the field about the validity of personalized learning and regional support network strategies to improve student achievement</li> </ul>

While the logic model and the use of personalized learning strategies are applicable to all geographic regions, they will particularly benefit schools in rural Tennessee where resources are scarce and it is more difficult to meet the needs of all students. Rural schools in Tennessee face many challenges: Students have fewer school choices due to geographic isolation; low wages make it difficult for rural schools and LEAs to recruit and retain effective educators; and rural schools often lack the capacity to provide rigorous or specialized coursework, especially in areas that are critical to students' future academic success (Tennessee SCORE, 2011).

## **Absolute Priorities**

NF submits this proposal under *Absolute Priority 1—Supporting High Needs Students*, and *Absolute Priority 5—Evidence-Driven Practices*. We are applying as a *rural* applicant.

Rural LIFE will support high-need students through the use of evidence-based personalized learning strategies. Personalized learning provides great hope for the students of rural Tennessee. Experts recommend that educators personalize instruction for all students so they are prepared to excel under the new more rigorous standards (Council of Chief State School Officers, 2011). As learner diversity expands, teachers need additional knowledge and skills to personalize learning for students and help them reach new academic standards (Council of Chief State School Officers, 2011). Schools using personalized learning have closed achievement gaps, including for low-income students, English Language Learners (ELLs) and students with disabilities subgroups (Getting Smarter, 2016; Murphy, et al. 2014; Pane, et al., 2015; Reform Support Network, 2014).

Rural LIFE will target improvements in student literacy across the curriculum at the middle school level, using personalized learning approaches. New literacy standards provide expectations for how students will read and write in history/social studies, science and technical subjects, and help prepare students for the literacy demands of college and careers (Tennessee Core, 2016). Since reading is the foundation for literacy in other content areas, the project's evaluation will use student scores on state reading assessments to analyze the impact it has had on student achievement.

Rural LIFE will serve students enrolled in 73 schools in LEAs in 11 counties that have been identified in the region of Tennessee served by NF. The 73 schools have an estimated total enrollment in grades 6-8 of 19,700 students. Of this total, 61% or 12,000 students would be considered high-need based on their poverty level.

### **Section A: Significance**

### A1. The Rural LIFE addresses a problem of significant magnitude and severity.

Across the country, 32.9 percent of all elementary and secondary public schools are rural. 20.4 percent of all public school students are enrolled in rural school districts (Johnson, et al., 2014). Students in rural areas have disproportionately greater challenges with literacy than their non-rural peers. Children in rural areas are less likely to be proficient in letter and sound recognition when they enter kindergarten than non-rural children (Grace, et al., 2011). The rural school districts included in this proposal score below the state average in reading and have reading achievement gaps for students with disabilities and ELLs that exceed the state average. Some reading gaps reach as high as 60 percentage points (Tennessee Department of Education, 2016).

Rural schools are serving larger numbers of students that schools historically have not served effectively: the percentage of minority, English language learners, and students eligible for free or reduced price lunch has been steadily increasing in these areas (Johnson et al., 2014).

As rural schools see their student populations shift, they are under increasing pressure to improve academic results for their high-need students and close the persistent achievement gap in academic performance, dropout rates, college-completion rates, and other measures of success. Since a majority of all regular school districts are in rural areas (U.S. Census Bureau, 2014), it is becoming increasingly important to develop a rural strategy in our efforts to close the achievement gap nationwide. Rural schools, however, are frequently unable to provide their students high-quality instruction in a cost-effective and sustainable manner (Ryan, 2015).

A report to the Carnegie Foundation says that most of nation's efforts to improve reading skills have been focused, for obvious and good reasons, on early literacy. It says, "Somewhat neglected in those various efforts was attention to the core of reading: comprehension, learning while reading, reading in the content areas, and reading in the service of secondary or higher

education, of employability, of citizenship. It is clear that getting third graders to read at grade level is an important and challenging task, and one that needs ongoing attention from researchers, teacher educators, teachers, and parents. But many excellent third-grade readers will falter or fail in later-grade academic tasks if the teaching of reading is neglected in the middle and secondary grades" (Biancarosa, et al., 2006). This report, Reading Next, has proved to be the basis of excellent work in the area of middle and high school literacy, with recommendations that guide quality literacy efforts, including the work in the Rural LIFE project. Middle grade students who struggle to read fluently "experience a wide range of challenges that require an equally wide range of interventions."

A related report (Carnegie Council on Advancing Adolescent Literacy, 2010) says that "literacy demands" change and that students change, but schools have not changed. Texts are longer and more complex; there are greater conceptual challenges and obstacles to reading fluency; there are more detailed graphic representations linked to texts; and each content area has its own set of literacy skills. Professional development for teachers and the effective use of data are described as the keys to improving adolescent literacy.

### A2. Rural LIFE demonstrates promising new strategies that are nationally significant.

Researchers have shown that personalized learning can have a positive impact on student achievement (Clayton Christensen Institute, 2015; Murphy, et al., 2014). One study found that students in schools using personalized learning performed significantly better on math and reading assessments than comparable students, with particularly strong progress in elementary and middle grades (Pane, et al., 2015). At the same time personalized learning has had limited implementation in traditional rural schools at the middle school level. Rural LIFE advances two promising strategies that build on this research and address challenges facing rural schools.

A shared services network (SSN) to support implementation to scale among a region of rural schools. Shared services make implementing school and LEA reforms in rural settings more manageable and cost-effective (Nelson, 2010; Rural School and Community Trust, 2014). The SSN will leverage economies of scale to provide all schools with the support and technical

assistance they need to implement personalized learning strategies. NF's 2010 i3 grant showed that centralizing the implementation supports for multiple rural high schools and LEAs was effective at improving student outcomes (ACT scores, AP participation, AP exam scores, college enrollment rates and college persistence rates) (Mokher, et al., 2016).

Technology as a key component of the design of personalized learning. As noted earlier, several sources recommend using technology for personalized learning, especially in rural areas (Tennessee SCORE, 2011). Technology has been identified as being helpful to schools and LEAs implementing personalized learning strategies at scale (U.S. Department of Education, 2010). Technology can connect more students to great teachers and increase access to online resources for teachers and students (Hassel, et al., 2015). Technology gives teachers more flexibility to redesign instruction and drive personalized learning (Patrick, et al., 2013). Innovative technologies designed to personalize learning have improved outcomes for students and increased English proficiency among ELL students (Kennedy, et al., 2013). By using technology, rural schools can overcome the longstanding obstacles of recruiting and retaining teachers, longer distances between schools and student homes, and relatively higher costs for rigorous in-person courses at smaller schools (Hassel, et al., 2015).

Rural LIFE builds on this strategy by deploying technology-enabled literacy-focused personalized learning. Schools will identify their specific technology needs as part of their personalized learning model.

### A3. Rural LIFE is an exceptional approach to implementing evidence-driven practices.

Rural LIFE will introduce new, high-impact instructional practices in rural Tennessee. It will do so with an exceptional framework that offers collaborative and technology-enabled solutions to the challenge of implementing personalized learning that can be adapted for scaling in the rural context. What truly differentiates this program from most others is the *dual emphasis* of adolescent literacy and personalized learning. In many (or most) personalized learning initiatives, the emphasis is on the technical equipment or technology-based delivery of traditional content. Our approach is to emphasis literacy skills, with technology as one tool.

More schools and LEAs are recognizing the potential of personalized learning, and researchers are measuring its positive impact on student achievement. Rural LIFE is uniquely positioned to validate the use and implementation of these strategies at scale among a regional cluster of rural schools and to formalize and codify training materials, resource guides and toolkits that other schools and LEAs can consult when using and implementing these strategies.

Using Personalized Learning Strategies: Each school will engage in a process to select the evidence-based personalized learning models and practices that meet the needs of its students with help from experts and academic coaches. A variety of models of personalized learning have emerged in research and practice as effective including the rotation model, the flex model, the a la carte model and the enriched model (Clayton Christensen Institute, 2016). There are also various effective personalized learning practices, including using learner profiles, personal learning paths, competency-based progressions and flexible learning environments (Pane, et al., 2015).

Schools will have the flexibility to adopt any of these models and practices, providing their approach must satisfy these four research-based criteria of personalized learning: (1) teachers customize instruction for each student in a way that adapts to the student's needs, progress and objectives; (2) teachers collect and use detailed information on student learning to adjust their instruction; (3) students cover material and reach core competencies at an individual pace; and (4) schools reconfigure their daily schedules and physical spaces to complement personalized learning strategies.

Supporting Successful Implementation of Personalized Learning: Once personalized learning strategies are identified, LEAs and schools will develop implementation plans that chart a path for school-wide use. These implementation plans will be updated at least annually to reflect changing circumstances and experience.

Rural LIFE will create a system of supports designed to ensure schools and districts can execute on their implementation plans for personalized learning. The primary support system will be provided by an innovative shared services network (SSN).

The SSN will provide lead teachers, faculty and staff with a variety supports, allowing the Rural LIFE to leverage economies of scale to provide districts and schools with capacity and resources that they would otherwise have difficulty acquiring if they worked in isolation. Rural LEAs often have small administrative staffs and limited budgets, but when they collaborate and are provided with shared services, they find new practices within reach. The SSN will provide the supports described in Table 1.

**Table 1. Supports Provided through Shared Services Network** 

Academic Coaches	
<ul> <li>Description of Support</li> <li>Support and train lead teachers</li> <li>Coach teachers one-on-one and in small groups</li> <li>Model effective instructional strategies</li> <li>Observe teachers and provide them with high-quality feedback</li> <li>Engage parent groups and the public to raise awareness about personalized learning</li> </ul>	<ul> <li>Details</li> <li>9 coaches (6 academic, 2 social-emotional; 1 instructional leadership)</li> <li>Coaches chosen from among teachers who have successfully implemented personalized learning and have some experience in instructional leadership</li> </ul>
<ul> <li>Professional Learning Opportunities</li> <li>Description of Support</li> <li>Opportunities for teachers and others to deeply engage on relevant topics:         <ul> <li>Effective personalized learning strategies</li> <li>Selecting and using online products and applications</li> <li>Creating and using high quality assessments</li> <li>Understanding and using data</li> </ul> </li> </ul>	<ul> <li>Details</li> <li>Designed to be aligned to standards, integrated, job-embedded and sustained</li> <li>Formats include <ul> <li>Summer institutes</li> <li>Webinars</li> <li>Professional learning</li> </ul> </li> </ul>
<ul> <li>Classroom configurations and flexible uses of time</li> <li>Teachers and others engage with each other to share experiences, successes and challenges and collaboratively improve practices</li> <li>Model classrooms and laboratories demonstrate different personalized learning strategies</li> </ul>	communities (school based and cross-school)  Online learning modules and instructional practices videos
Online Learning Resources	
Description of Support	Details
Teachers use online resources to supplement classroom activities and support student individualized learning	<ul> <li>Maintained in existing NF online resource and course library</li> <li>Centralized scheduling and</li> </ul>

- Students access resources to support learning needs
- Teachers share and co-create instructional practices and classroom materials with peers
- Middle school students able to earn high school credit (an important high school readiness and acceleration strategy that is frequently unavailable in rural schools)

coordination of course offerings

## Data Analysis Capabilities and Formative Assessment Tools

## Description of Support

- Teachers provided with data, data analysis and information on how to use data to improve instructional practices and drive personalized learning strategies
- Teachers/schools instructed in use of Tennessee DOE digital dashboard
- Identification of high-quality formative assessments and/or instruction in using of assessment capability built into online resources

#### Details

- Project staff directly supporting data analysis capacity
- Tennessee DOE provides all LEAs with access to digital dashboard built around a "real-time" database that supports a variety of reports, allows interoperability between data sources, and uses formative assessment data to track student progress

### **Section B: Strategy to Scale**

## B1. Rural LIFE meets unmet demand for literacy-focused middle-grade personalized learning to enable proposed scale.

Rural LIFE meets the demand in rural Tennessee for strategies to improve academic outcomes in literacy among students in grades 6-8. NAEP results show that rural Tennessee districts perform worse on reading assessments than statewide averages and rural districts nationwide (Johnson, et al., 2014). These districts and their communities demand new ways to help students achieve at higher levels and prepare for rigorous high school coursework. NF's 2010 i3-funded validation initiative in rural Tennessee successfully introduced new technologies and online courses in 15 LEAs and 30 high schools serving 27,000 high school students. NF's experience implementing this grant helped stimulate the demand for more rigorous coursework and resources to create a college-going culture in elementary and middle grades (see Bellwether, Niswonger i3 Sustainability Planning, in Appendix J). School leaders and other community

stakeholders realize that they must take action with younger students to ensure readiness for success in the more rigorous high school settings created as a result of the 2010 i3 grant.

Research confirms NF's experience that "the level of academic achievement students attain by eighth grade has a larger impact on their college and career readiness by the time they graduate from high school than anything that happens academically in high school" (ACT, 2008, p. 2).

Murnane and Levy (1996) have identified a set of "new basic skills" that high-school graduates need in our current economy. These "new basic skills", while built on the foundation of basic literacy, also extend beyond basic proficiency in reading... into the areas of critical thinking, hypothesis-testing, effective oral and written communication, and the mastery of new technologies. Organizing instruction in ways that meet the needs of *all* our nation's adolescent students—including those struggling, those showing competent development, and those performing at an advanced level—has become the new literacy challenge (Carnegie Council on Advancing Adolescent Literacy, 2010).

### B2. Rural LIFE addresses barriers that prevented applicant from scaling in the past.

Rural LIFE addresses challenges commonly cited by researchers as major obstacles to implementing personalized learning at scale: the absence of technology infrastructure, and comprehensive data systems and the lack of continuous professional development for teachers (Williams, et al., 2014).

The challenges in Tennessee's high-poverty rural schools are well documented. In Tennessee's draft ESSA State Plan (2016), the Department of Education notes that high-need students in rural areas (like Northeast Tennessee) often don't have access to excellent teaching. Across the state, but especially in its rural areas, there is a lack of quality teacher preparation programs, insufficient professional learning opportunities, and variance in leadership skills and capacity. Rural LIFE's SSN will address these barriers by delivering high-quality supports for LEAs, schools, teachers and other staff (see Table 1).

**Technology infrastructure.** Some researchers believe that "it is almost impossible to bring [personalized learning] to scale for all students without capitalizing on technology" (Wolf,

2010, p. 23). Schools with personalized learning experience also cite the need for extra time and funding to develop technology infrastructure (Bernatek, et al., 2010). Among Tennessee LEAs, infrastructure capacity varies widely (Tennessee SCORE, 2013). Rural LIFE pairs technology with ongoing infrastructure supports. The SSN will work closely with LEAs and schools to assess their infrastructure needs and technology readiness, deliver technical assistance and share effective infrastructure management practices.

Comprehensive data systems. Data from each LEA's formative, interim and summative assessments should "guide teaching and learning and give educators illustrative data that can be used to personalize instruction" (Williams, et al., 2014, p. 10). Teachers should have real-time access to data to understand and act on the needs of students (Wolf, 2010). NF will partner with the TDOE and LEAs to refine data systems and increase capacity among educators to effectively use data to improve instruction and personalization. Teachers will use a combination of statewide summative (TCAP) and locally selected formative assessments—which the SSN will help districts include in the database – to inform instructional decisions and monitor student progress toward reaching college- and career-readiness benchmarks.

Continuous professional development. Rural schools and districts often face unique challenges related to professional development—specifically difficulty recruiting school leaders with a strong knowledge of instructional practice and a geographically dispersed educator population. Technology can help address geographic barriers by allowing teachers to collaborate virtually, access online training modules or use webcams to observe other teachers in the classroom. But technology alone isn't sufficient: Effective professional development must also be continuous, job-embedded and collaborative, and take place in a school environment conducive to professional growth and learning (Frazer, et al., 2014). Through the supports described in Table 1, Rural LIFE will create school environments conducive to professional growth.

Tennessee LEAs struggle with giving teachers the appropriate training to use new technology in the classroom (Tennessee SCORE, 2013). The SSN will provide ongoing

professional development (see Table 1 above) to all teachers and principals online and in-person, and leverage lead teachers, coaches and innovative classroom laboratories for targeted support. Professional development will focus on strategies teachers can use to personalize and maximize learning opportunities for their students.

While the term "professional development" has been used, we respect and support the use of "professional learning." Teachers should be active partners in determining the content of their learning, how their learning occurs, and how they evaluate its effectiveness. They should take an active role in their own continuous development. Like the students' learning, their learning should be personalized.

## B3. Rural LIFE is highly replicable in a variety of settings and with a variety of populations.

Personalized learning is a highly replicable strategy across rural and non-rural areas and with a variety of populations. Its regional support structure and emphasis on delivering services through an SSN to multiple districts may not be as necessary in large urban and suburban districts implementing personalized learning, but it could very well be a solution for smaller school districts that are in close proximity to each other in the nation's metropolitan areas.

If successful, Rural LIFE should be replicable in rural regions throughout America. Experts agree that a rural school improvement strategy should target regional clusters of high-poverty schools in similar geographic and cultural contexts (Johnson, et al., 2009).

Other rural areas will also benefit from Rural LIFE's experience integrating various services to enable personalized learning. Rural areas need new mechanisms to serve communities across long distances, where local providers often lack capacity (The White House, 2015). The SSN will support schools online and in person through teacher professional development, classroom instructional support and technology infrastructure assistance. There is therefore a growing sense that regional support structures work for teachers and students and can be replicated in other rural settings. Rural LIFE will add to the growing body of knowledge about how rural LEAs in diverse parts of the country can combine services to implement

personalized learning.

Personalized learning and regional support structures are replicable in all types of school districts. There are already examples of networks of schools that include those in urban, suburban and rural areas that have begun to implement personalized learning strategies for all students. Summit Public Schools, Facebook and 19 public schools across the country are partnering to implement technology-based personalized learning strategies in urban, suburban and rural settings (Dobo, 2015). Further, the New England Secondary School Consortium (NESSC), which includes nearly 500 secondary schools in Maine, Vermont, New Hampshire, Rhode Island, and Connecticut, is working to scale personalized learning across New England in all types of districts (Education Cities, 2014). These examples suggest that personalized learning can be replicated in a variety of settings.

Moreover, personalized learning is a strategy that is replicable for a variety of populations of students because it is designed to meet their unique needs. The National Center for Learning Disabilities examined personalized learning and concluded that students with disabilities in settings that appropriately apply personalized learning strategies can achieve at high levels if they receive specialized instruction tailored to their unique needs, supports that build on their strengths and mitigate their challenges, and learn in an environment that is engaging. NCLD also concludes that personalized learning develops important self-advocacy skills: "This opportunity is vital to the growth and success of students with disabilities and should not be overlooked" (National Center for Learning Disabilities, 2016).

The Friday Institute, part of the North Carolina State University College of Education, will play an important role in this project. The Friday Institute has extensive experience in providing and evaluating professional learning opportunities for state- and district-level leaders, principals, instructional coaches, and educators. They plan to use this opportunity to build a coaching program that will then be scaled to other partner organizations in locations around the country. As part of the scaling and dissemination plan the Friday Institute will create videos, communication tools and other resources that can be used with the coaching program by the

## Section C: Quality of the Project Design and Management Plan

## C1. Project goals, objectives, and outcomes

Rural LIFE aims to increase students' literacy skills, boost teacher effectiveness, and document its successes so that the program can be replicated in other areas. Table 2 below shows the goals, objectives and outcomes of the project.

Table 2: Rural LIFE Project Goals, Objectives and Outcomes

Goal 1: Students – including high-need s literacy as a result of teacher use of pers	tudents — demonstrate increased proficiency in onalized strategies.
Measurable Objectives	Outcomes
<ul> <li>Evaluation</li> <li>Students in the treatment schools show higher achievement in reading than students in control schools.</li> <li>Reporting</li> <li>Treatment schools close achievement gaps at a faster rate than control schools.</li> <li>•</li> </ul>	<ul> <li>After three years, treatment students, who at the start of the project are in grade 6, show statistically significantly higher proficiency by 8 as measured by the TCAP reading assessments.</li> <li>After two years, treatment students who at the start of the project are in grade 7, show statistically significant higher rates of proficiency by 8, as measured by TCAP reading assessments.</li> <li>Reporting</li> <li>Achievement gaps among students in treatment schools are closed at a rate 50 percent higher than the rate in control schools after two years.</li> <li>The percentage of students in treatment schools reaching "proficient" or "advanced" levels on the 8 TCAP assessments in reading increase by 5 points in year one, 10 points in year two, and 10 points in year three.</li> </ul>
Goal 2: Teachers demonstrate increased	effectiveness through use of personalized
learning strategies	eneed thess through use of personalized
Measurable Objectives	Outcomes
Evaluation	Evaluation
Teachers in treatment schools use personalized learning strategies (learner profiles, competency-based)	In responses to surveys, teachers in treatment schools indicate the use of personalized learning strategies at higher percentages than

- instruction, etc.) and related technology at higher levels than teachers in control schools.
- Teachers in treatment schools are more effective (as measured by student achievement value added scores) than teachers in control schools.

### Reporting

- Students in treatment schools receive instruction from teachers trained in and using personalized learning strategies at higher rates than students in control schools.
- Teachers in treatment schools access data more frequently and demonstrate changes in instructional practices based on data more frequently than teachers in control schools.
- Teachers in treatment schools show greater satisfaction with classroom instructional experiences and data systems at a higher rate than control schools.

- teachers in control schools.
- Teachers in treatment schools show statistically significantly higher student achievement value added measures than teachers in control schools.

### Reporting

- By year 3, 85 percent of ELA teachers in treatment schools utilize personalized learning strategies at least 50 percent of the time.
- By year 3, 85 percent of ELA teachers in treatment schools have positive value added scores.
- Results of teacher logs and surveys show increases in the use of data by teachers in treatment schools.
- Results from teacher surveys show increasing satisfaction among teachers in treatment schools using new instructional practices, personalized learning strategies and data systems.

Goal 3: The project approach can be suc	ccessfully replicated					
Measurable Objectives	Outcomes					
Reporting	Reporting					
• Control schools successfully implement project components beginning in year 3; implementation occurs at a faster pace than treatment schools.	• Control schools show improvement on key outcomes in year 5.					

Table 2 includes two types of objectives and outcomes—those that are the focus of the evaluation described in more detail in Section D, and those that will be used for reporting about the project and not part of the formal evaluation. Baseline data will be collected in all schools in spring 2018 and not later than September 2018.

### C2. Project management plan, including responsibilities, timelines and milestones.

NF successfully managed an i3 validation grant awarded in the 2010 cohort, and brings that experience to the project management plan presented here. The plan is designed to achieve

the objectives of the project on time and within budget. The key components of the plan are:

Organization and Staffing: As President and CEO of the Niswonger Foundation, Dr. Nancy Dishner will have ultimate responsibility for the success of the project. She will be involved in high-level decision-making and project oversight and coordination. Rural LIFE will hire an experienced team comprised of the Executive Director (part time), Director of Instructional Practice (full time), Director of Technology and Online Learning (full time), and Director of Professional Learning (part time). The Executive Director manages the project on a day-to-day basis. The Executive Director will be Dr. Richard Kitzmiller. Dr. Kitzmiller has over 40 years of education experience, including almost a decade as a district superintendent. He has successfully managed complex organizations; he currently serves as the Foundation's Director of Programs & Outreach. Dr. Kitzmiller will supervise project staff and ensure that the project stays on schedule and on budget, meets all milestones, and resolves problems quickly and successfully. Both Drs. Dishner and Kitzmiller were responsible for managing the 2010-2015 i3 project. Their resumes can be found in Appendix F.

The Director of Instructional Practice will have at least seven years of demonstrated success in professional development and significant experience implementing personalized learning strategies at a school or district level. This director will lead the design of district and school plans for personalized learning and coordinate all aspects of personalized learning implementation support. The Director of Technology and Innovation will have at least seven years of relevant experience with the use and implementation of classroom technology strategies. This director will be responsible for the use of project technology, including the training of coaches and lead teachers, curating of online applications and advising on technology infrastructure. The Director of Professional Learning will have at least seven years of experience coordinating professional development, with some experience related to personalized learning. This director will work with the Director of Instructional Practice to ensure professional development activities are relevant and of quality. The project will also hire appropriate support staff including a compliance officer, technical support engineer, and administrative support.

NF will establish a leadership team comprised of Dr. Dishner, Dr. Kitzmiller and representatives with curriculum and instruction expertise from the 18 LEAs participating in Rural LIFE. The leadership team will meet quarterly, establish and approve an overall project implementation plan, which currently has seven strands (see below), ensure a robust monitoring and feedback system and receive quarterly updates on the progress of implementation and evaluation. They will be involved in resolving challenges to project success and charting course corrections and making plan revisions as may be required. They will also advise on the hiring and evaluation of the project staff and oversee the activities that constitute the SSN.

The project and leadership team will be served by three advisory groups: one for superintendents, another for principals and one for teachers. Advisory groups will convene quarterly to provide input on the overall project plan and implementation, send forward any concerns and identify areas for improvement and strategies to overcome them.

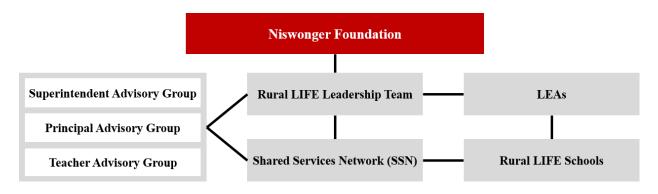


Figure 2: Rural LIFE Organizational Structure

**Evaluation Team:** Insight Policy Research, Inc. (Insight) will lead the research and evaluation of the project. Insight has substantive experience with personalized learning, educational technology, teacher effectiveness and high quality professional development. Insight also brings expertise in data collection, analysis, report and presentation development, and dissemination. Insight and its staff have a proven track record in designing rigorous evaluations of educational programs and policies. Insight previously worked with NF on the evaluation of its 2010 validation grant.

**Project Management Strands:** Table 3 shows key milestones for each of the eight strands of the project management plan described in some detail here:

- 1. *Project Planning, Implementation and Monitoring:* Project staff will develop detailed implementation plans, monitor them and ensure effective implementation.
- 2. *LEA Engagement and Planning Activities:* Schools and LEAs will prepare implementation plans, which will be updated at least annually to reflect changing circumstances. These plans will focus on the implementation of personalized learning strategies in grades K-2, so the youngest students learn the skills and practices that will enable their use of personalized learning in later grades.
- 3. Ongoing coaching to support classroom and school implementation: 9 instructional coaches from local LEAs, hired for 1-2 years and supervised by the Director of Professional Learning. The Friday Institute will develop an ongoing and job-embedded professional learning program for coaches that will focus on literacy instruction and personalized student learning, while also building participants' capacity in coaching skills and strategies. This program will builds upon the work of the North Carolina Digital Leaders Coaches Network (NCDLCN), a program that builds coaches' capacity to support teachers in their implementation of student-centered learning. Coaches will focus either on curriculum & instruction, social & emotional learning and/or supporting administrators as instructional leaders. Coaches will be trained on coaching best practices endorsed by Learning Forward, which has found that when coaches follow up with teachers after professional development sessions and provide ongoing support, those teachers are more likely to implement the strategies they learned (Joyce, et al., 2016).
- 4. *Lead Teachers:* The Director of Instructional Practice in collaboration with coaches and school principals will select one or two lead teachers per school, after assessing potential candidates' teaching and building-level leadership experience and disposition for innovative practice. Lead teachers will be paid a \$4,000 annual stipend and design and deliver professional development activities to other classroom teachers at their schools,

- connect teachers with personalized learning resources (including model classroom laboratories), advise on classroom configurations and participate in evaluation activities. Lead teachers will receive intensive professional development and provide feedback focused on project improvement.
- 5. Online Learning Resources: Project staff will maintain online learning resources to support the use and implementation of personalized learning. Project staff will help schools and LEAs evaluate online applications and resources that enable personalized learning and maintain online reviews for such resources. The project will build on NF's existing online resource library and add course offerings appropriate for middle school students seeking acceleration and enrichment opportunities.
- 6. *Professional Development*. In addition to coaching and classroom laboratories, NF will offer 1) summer institutes to provide intensive training activities for teachers on personalized learning and opportunities to use learner profiles, technology resources to support personalization, data to improve instruction and so forth; 2) webinars, which will feature the region's teachers as they address implementation strategies; 3) support for professional learning communities (PLCs) that will be site-based, allowing for teachers to meet face-to-face and discuss their experiences and share practices, or electronic, and span multiple schools and LEAs; 4) online training modules that present high quality publicly available resources, including videos of teachers modeling personalized learning strategies; 5) model classrooms, with support from lead teachers; and 6) support for their learning with micro-credentials.
- 7. Assessment and Data Analysis Support. Each school and LEA will adopt formative assessments, and use data from those assessments to improve instruction and inform teaching and learning. Through the SSN and supports listed in Table 1, teachers receive professional development on using data from formative assessments and accessing student data in the TDOE-maintained digital dashboard.

Table 3. Management Plan: Activity Strands and Key Milestones

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	Develop and refine coaching micro- credentials*	Develop and refine coaching guide*	Networking opportunities	Quarterly meetings; reporting	Intensive training for coaches	Identify/Hire Coaches	Coaching. Responsible Individual/Org.: Director of Instructional Practice; Friday Institute	Scheduling and Operations	Remodeling; Technology deployment	Prepare specifications for remodeling	Identify model classrooms	Innovative Classroom Laboratories. Responsible Individuals/Org.: Director of Instructional Pra	Networking for principals & superintendents	Engagement activity and planning; update annually (Control schools)	Engagement activity and planning; update annually (Treatment schools)	Develop LEA Engagement, Readiness and Planning Toolkit; Update and refine	LEA Engagement and Planning. Responsible Individuals/Org.: Executive Director;	Monitoring/feedback activities	Leadership team and advisory group meetings	Develop detailed project plan; update annually	Recruit/Hire Project Staff	Project Planning, Implementation and Monitoring. Responsible Individual/Org.: Executive Dir.	Season:	Academic Year:
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Summer: July-Sept.; Fall: Oct.-Dec.; Winter: Jan.-March; Spring: April-June \*Note: Formalized and codified resources

Table 3. Management Plan: Activity Strands and Key Milestones

development (incl. classroom lab)	Create/identify/post Online PD resources	Professional learning communities	Webinars and archives	Summer Institutes	Develop detailed PD plan; update annually	Professional Development. Responsible Individuals/Org.: Director of Professional Learning; Co	Identify resources, reviews and post results	Establish repository & web capability	and validating online resources/apps; update annually	Develop detailed plan for identifying	Online Resources. Responsible Individuals/Org.: Director of Technology and Online Learning;	Develop and refine lead teacher guide*	Networking Opportunities	Intensive Training	Identify/Designate Lead Teachers	Lead Teachers. Responsible Individual/Org.: Director of Instructional Practice; Coaches	Season: Su	Academic Year:
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Summer: July-Sept.; Fall: Oct.-Dec.; Winter: Jan.-March; Spring: April-June \*Note: Formalized and codified resources

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### C3. Feedback and continuous improvement procedures.

The project leadership team, in cooperation with Insight, will be responsible for gathering feedback from students, parents/guardians, teachers, principals and superintendents for the purpose of improving the project on a continuous basis.

The leadership team will develop survey instruments for these stakeholder groups and administer the survey at the midpoint of each academic year. The surveys will assess 1) educator, parent and student knowledge of effective personalized learning practices, 2) actual changes in classroom practice and 3) quality and type of supports schools, districts and the SSN are providing to teachers, coaches, principals and district staff. The surveys will also ask educators to identify what additional supports or resources they need to more effectively implement personalized learning strategies and help students meet standards.

Lead teachers and coaches will also submit monthly reports in which they review progress schools are making to implement project goals, identify obstacles, suggestions for removing them and elevate promising practices and success stories that other schools/districts can potentially learning from.

Project staff, district-level project coordinators and coaches will visit each school each mid-year to gauge fidelity of implementation, relying on school and district plans and cross-district project goals. They will use a standardized rubric developed by the project's evaluation partner, Insight (see Appendix J), in collaboration with select educators from partner districts.

Project staff will synthesize the information generated by the surveys, reports, site visits and rubric and provide a summary of that synthesis along with suggestions for improvement to teacher, principal and superintendent advisory groups. The groups will use the information to make appropriate suggestions to the leadership team, which will review the suggestions and discuss with project staff what steps should be taken to improve project implementation.

Project staff will publish an annual project update in which they review the feedback received from the field and identify the adjustments the project will make to address the feedback they received. Updates shall feature the reflections of both teachers and principals from the

advisory groups to reinforce the project's commitment to engaging school-based educators in both the design and implementation of the project.

### C4. Incorporation of the project into the ongoing work of the applicant.

NF will implement a financial model that provides front-end investments in capacity development and the implementation of new practices which, over the grant period, will reach a point of critical mass (expected to be when 50 percent of teachers in a building are using personalized learning strategies) thereby allowing them to be sustained beyond the grant period at much lower costs and within available resources of the schools and LEAs. As more and more teachers are trained, and more personalized learning strategies are implemented, a "new normal" will be established.

Sustaining this future state on an on-going basis can be done at significantly lower cost because investments in the costliest program components have already been made and can sustain the work. NF employed this approach with its prior i3 grant, and all high schools involved in that project are currently sustaining project activities with general operating and limited private funds.

With the technical assistance of Bellwether Education Partners, NF and the consortium partners deliberately considered sustainability during the later years of the i3 project. (see Appendix G) Following the end of the project, a new (and enlarged) consortium sustained the most successful aspects of the project. We will, in a similar way, intentionally design for sustainability in Rural LIFE.

### **Section D: Quality of Project Evaluation**

The evaluation will employ a randomized, controlled trial (RCT) design to assess the impact of personalized learning strategies on teacher effectiveness and student achievement in literacy. The RCT will address the following research questions: (a) What is the impact of the project on 8th grade students' achievement in literacy; (b) What is the impact of the project on teacher use of personalized learning strategies; and (c) What is the impact of the project on teacher effectiveness ratings? Sections D2 and D3 further detail the key confirmatory and exploratory research questions. Insight has conducted similar evaluations for the U.S. Department of

Education and NSF and has designed this evaluation to meet WWC group design standards without reservations using the Teacher Training, Evaluation, and Compensation Review Protocol, version 3.2.

# D1. Evaluation methods could produce effectiveness evidence that would meet the What Works Clearinghouse Evidence Standards without reservations.

There are 73 schools eligible to participate in the study, of which we will recruit and randomize at least 65. The schools will be randomly assigned to the treatment or control condition. Randomization will occur at the school level because use of personalized learning strategies is a school-wide reform, and all English Language Arts teachers will be expected to participate. Because literacy can be incorporated across the curriculum, teachers in subjects outside of English Language Arts will have access to the resources, but priority access and support will be given to the ELA teachers. The treatment schools will participate in the program, receiving supports and implementing personalized learning strategies starting in the 2018-2019 school year. The schools in the control group will continue with business as usual. Teacher surveys, teacher effectiveness scores and student achievement scores on TCAP assessments (part of TNReady) will be collected from both treatment and control schools. The analytic sample will include all ELA teachers who are employed at the participating schools in fall 2018. It will also include all students who begin 7<sup>th</sup> grade (cohort 1), or 6<sup>th</sup> grade (cohort 2) in fall 2018. Any students or teachers who join the participating schools after fall 2018 may participate in data collection, but their outcomes will not be part of the impact analysis.

Table 4. Measures to Examine Changes in Student and Teacher Outcomes by School
Year

0.4	I	Measure by School Yea	r
Outcome	2018-19	2019-20	2020-21
Student ELA score (cohort 1)	Grade 7 TCAP	Grade 8 TCAP*	
Student ELA score (cohort 2)	Grade 6 TCAP	Grade 7 TCAP	Grade 8 TCAP*

Teacher effectiveness	TDOE VAM score	TDOE VAM score*	TDOE VAM score*
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\*Note: Confirmatory measure. Cohort 1 includes students that enter the 7th grade in the 2018-19 year. Cohort 2 includes students that enter the  $6^{th}$  grade in the 2018-19 year.

Observations at schools and professional development events will provide a contextual understanding of implementation. Quantitative and qualitative measures of implementation will be used to understand variation in different contexts and their relationship to outcomes.

Extant Data. The evaluation team will collect academic and nonacademic data from the Tennessee Department of Education for all treatment and control schools at the student and school level. Academic measures will include scores on Tennessee's English Language Arts & Literacy (ELA), Mathematics, Science, and Social Studies assessments, grades 6-8. The confirmatory outcome is 8<sup>th</sup> grade ELA score, and exploratory analyses will be run looking at other subjects. Nonacademic measures will include demographic school-level (e.g., percent minority, free- and reduced-priced lunch, English language learner status, and student disability status) and teacher-level (e.g., years of experience, tenure, and professional development completed) data. We will also collect teacher effectiveness data (e.g., value added scores).

Teacher and Academic Coaches Surveys. Insight will use the Personalized Learning Survey used by Pane et al. (2015) to collect information from teachers, lead teachers, and academic coaches about the quality and usefulness of professional development, school professional environment, school data systems, characteristics of learner profiles, extent of project-based learning practices, extent of practices to support competency-based learning, and use of technology for personalization. Surveys will be administered through an online platform during the first and last months of the school year in all classrooms, in both treatment and control schools.

Observations. Insight developed a structured observation protocol to document use of personalized learning strategies. Insight will conduct observations at both treatment and control schools in the 2018-2019 and 2019-2020 years. The observational data will be used for feedback and to provide context and evidence of implementation, but will not be used for impact analyses.

Document & Artifacts. Insight will collect data from coach activity logs, professional

development materials (e.g., attendance records, agendas and resources), teacher lesson plans, and classroom instructional materials.

Data from the RCT will enable us to answer the two confirmatory research questions: (1) What is the impact of attending a school supported by Rural LIFE on 8<sup>th</sup> grade students' achievement in English Language Arts? (2) What is the impact of a school receiving support from Rural LIFE on the school's average reading teacher scores from Tennessee's value added model? The evaluation will also address several exploratory research questions (differences by student subgroup, changes in the achievement gap, changes in other academic subjects, differences in outcomes by rural versus non-rural school status, relationship between fidelity of implementation and outcomes).

## D2. Evaluation will provide guidance about effective Rural LIFE strategies suitable for replication in other settings.

The evaluation will also include a fidelity of implementation analysis that will identify effective strategies and inform replication. The evaluation will generate information about potential differential effects of the personalized learning model across diverse school settings and student populations. The Rural LIFE project will examine implementation across 18 districts. The schools are majority rural, but include non-rural schools. The analyses will also examine variation within and between schools and districts. Use of within-region control schools that will begin implementation in the 2021-2022 school year will allow us to track outcomes as the program is implemented at scale. Insight will record detailed descriptions of the activities that each school engages in (which personalized learning strategies were chosen, for which students), the supports and professional development provided to each teacher, and how the teachers use data and feedback. This will result in a written strategy for replication along with expected changes in student and teacher outcomes if the same strategies are followed in different schools with other students.

## D3. Methods of evaluation will provide valid and reliable performance data on project outcomes.

The evaluation will use valid, reliable achievement measures as the confirmatory student outcome, and value added scores of teachers for the confirmatory teacher outcome. Throughout the project Insight will collect data via online surveys (using an existing instrument) on teacher use of personalized learning strategies and teacher access to and use of student data. The teacher survey data will be triangulated with observations to ensure validity. The use of an RCT design will provide valid and reliable performance data. Insight will track attrition, and collect baseline measures in case there is high attrition and baseline equivalency needs to be established. If non-equivalency is found between treatment and control groups, Insight will include any statistically significant different variables in subsequent analyses to adjust for baseline differences.

Descriptive statistics (e.g., measures of central tendency, measures of variability, and percentages) will be computed to identify basic summary information about the schools and teachers. For consistency, Insight will use the same scales developed by Pane et al. (2015) in their study.

Insight will use a multi-level model (students in schools, and teachers in schools) to estimate program effect on the student and teacher outcomes. The model will account for covariates that may be correlated with the treatment condition and with outcomes. Inclusion of these covariates in statistical models will permit unbiased estimates of the treatment effect and improve the precision of the estimates.

A similar personalized learning study found effect sizes for student reading outcomes of .14 for students in the middle grades (Pane, et al., 2014). Insight conducted power analyses to estimate the number of schools needed to achieve an MDES of .15 for student outcomes. The assumptions were as follows: one-tailed test,  $\alpha$ =.05, .80 power, and an ICC =.10, an average of 45 students per school, and 50 percent reduction in variance due to level 1 covariates, and 50 percent reduction in variance due to level 2 covariates. We will need to recruit and retain 65 schools.

D4. Evaluation plan articulates key components, mediators, and outcomes of Rural LIFE at a measurable threshold for acceptable implementation.

The evaluation consists of impact and implementation studies that will assess the

implementation of the personalized learning model's key components at the middle school level. The impact study is an RCT focused on student and teacher outcomes. The impact study will answer the key confirmatory questions by triangulating across several data sources. For the implementation study, Insight will work with the NF and partners to establish quantitative and qualitative indicators of program fidelity. Indicators will be collected through coach logs via an online survey, and online teacher and administrator surveys. For example, all treatment schools are to select personalized learning models to support their students. One indicator is the creation of a personalized learning plan. Another indicator is the percentage of teachers who report using any personalized learning strategies. Full implementation on that indicator can be achieved if the administrator produces a personalized learning plan and 90 to 100 percent of teachers report using personalized learning strategies. A school where 70 to 89 percent of teachers report using personalized learning strategies may receive a partial implementation rating on that indicator. Schools where fewer than 69 percent of teachers report using personalized strategies would be rated as low implementation on that indicator. During the first few months of the project the evaluators will develop a full implementation matrix as part of their evaluation plan. Implementation levels will be used as moderators in all exploratory analyses.

## **Evaluation timeline**

Year	Activities
One: 2017/18	<ul> <li>Work with Niswonger Foundation staff &amp; partners to get school districts' approval to access existing school and district data and any required consent</li> <li>Finalize design and sampling plan; randomize schools into treatment and control</li> <li>Refine evaluation study plan and submit the revised plan to ED</li> <li>Develop and adapt instruments to establish a baseline measure of teacher classroom practices</li> <li>Collect baseline data in all treatment and control schools</li> <li>Develop and adapt various data collection instructions</li> <li>Data collection, entry, coding, and scoring</li> <li>Analyze data and prepare annual report</li> </ul>
Two: 2018/19	<ul> <li>Collect student, teacher, and school academic outcome data in all treatment and control schools</li> <li>Collect teacher survey data on use of personalized learning, formative assessments, and approaches to literacy instruction from all ELA teachers in treatment and control schools</li> <li>Collect activity logs from academic coaches</li> <li>Observe practices in subsample of treatment and control schools</li> <li>Analyze data and prepare annual report</li> </ul>
Three: 2019/20	<ul> <li>Analyze student outcome and nonacademic data for cohorts 1a &amp; 1b</li> <li>Collect student outcome and nonacademic data in all treatment and control schools for cohorts 2a &amp;2b</li> <li>Collect teacher survey data on use of personalized learning, formative assessments, and approaches to literacy instruction from all ELA teachers in treatment and control schools</li> <li>Collect activity logs from academic coaches</li> <li>Observe practices in subsample of treatment and control schools</li> <li>Analyze data and prepare annual report</li> </ul>
Four: 2020/21	<ul> <li>Analyze student outcome and nonacademic data for cohorts 2a &amp;2b</li> <li>Analyze data and prepare annual report</li> </ul>
Five: 2021/22	<ul> <li>Analyze all prior year student outcome and nonacademic data for all cohorts</li> <li>Prepare final report</li> </ul>

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