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Office of Innovation and Improvement (OII): Skills for Success Grant

Fund for the Improvement of Education

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Table of Contents

Submitted by: Long Beach Unified School District – Long Beach, CA

Grant Application Narrative Sections	**Page**
Project Overview	1 - 2
Significance	2 – 6
Quality of the Project Design	6 – 13
Quality of the Management Plan	13 – 20
Quality of the Project Evaluation	20 – 25

Long Beach Unified School District (LBUSD), California's third largest school district, in partnership with the national nonprofit Jobs for the Future, and SRI International, a leading research and evaluation firm, will develop, demonstrate, and evaluate promising new tools and strategies that will dramatically enhance middle school students' non-cognitive skills, with an emphasis on STEM. This project, Long Beach Scholars 2.0 (LBS2.0) will build upon the Long Beach Scholars (LBS) program, a middle school elective course that embeds non-cognitive skills within STEM-focused college and career exploration class, and which incorporates Possible Futures, Possible Selves (PFPS), a cutting edge curriculum developed by JFF that guides middle school students to a college and career ready identity, and develops their personal agency to navigate decisions that affect future opportunities in STEM. Over the past two years, LBUSD and JFF have already created and piloted a dynamic body of work through LBS and PFPS that demonstrates the impact of non-cognitive strategies on middle school students. With this grant, **we will update, expand, test, and improve our existing efforts**—transforming LBS into LBS2.0, with a deep and deliberate focus on non-cognitive skill development as a means of improving outcomes, fully aligned with the latest body of research in this area and augmented by new or improved products as described below. Through this work, and a high quality evaluation conducted by SRI, LBS2.0 will help build a middle school culture in Long Beach that promotes high expectations for all students, and in so doing, refine and validate effective strategies for non-cognitive skill development with high replication potential.

This project brings together an exceptional partnership. LBUSD has a record of success in leading large-scale education innovation projects, and continues to receive national recognition for the district's work, including hosting visiting educator teams from across the US. JFF works in 42 states and manages several regional, state, and national education networks, as such,

LBS2.0 holds great potential to impact and transform the educational experiences not only for students in Long Beach but also in districts and after-school programs across the country. With SRI's expertise in rigorous research and evaluation, LBS2.0 will also shape the national and international dialogue on the theory and practices of non-cognitive skills development.

A. SIGNIFICANCE

A.1: While there is a growing interest in supporting non-cognitive skill development, there is a dearth of rigorous, aligned, and engaging materials to integrate this work into the classroom and existing school contexts. Limited educational hours and multifarious district priorities necessitate flexible resources that improve multiple student outcomes, including non-cognitive skills. To have wide utility, the instruction of non-cognitive skills should be developed within the bold context of meeting academic standards, addressing career and college readiness, and contributing to a cohesive 21st century graduate profile. Accordingly, **LBS2.0 will provide an array of innovative, high utility and readily accessible products** that support non-cognitive skill development and improved student outcomes in middle grades, with an emphasis on STEM.

These products will be flexible and modularized, adaptable for other settings, including afterschool and special education, as well as in classrooms. LBUSD and JFF each bring deep experience working directly with middle school students, commissioning and applying research findings on non-cognitive skills, and training teachers; this expertise will shape the creation of products as well as their refinement after the pilot stage. <u>New or improved products include:</u>

Modules on Non-Cognitive Skills, and for Content Teachers. For ease in adaptation to other contexts, core non-cognitive lessons (e.g., growth mindset, self-regulation, collaboration) will be modularized, and a series of lessons will be customized to core content areas of math, language arts and science for development of non-cognitive factors specific to a content area.

Future-Ready Portfolio. Students will reflect on and document their positive shift in mindsets, growing competencies, self-regulation and agency in Future-Ready Portfolios that will serve as key documents for relationship-building and course selection. The portfolio will support young people in their successful transition to high school, as a core component is mapping out possible high-school plans based on interests and future goals. As LBUSD has adopted graduate student profiles with global and 21st Century skills and competencies, this portfolio offers an innovative strategy to combine non-cognitive skill development with current district priorities.

Learner-Centered Professional Development modules. Many educators were trained before the recent emergence of non-cognitive research, and in addition to enhancing the LBS curriculum, LBS2.0 will engage and build ownership from the professionals supporting the work. JFF brings a sound professional development model that uses the action/reflection cycle to guide educators to internalize new thinking and transform their practice by engaging educators directly with non-cognitive research combined with practice-based inquiry. Professional development modules will be developed and the process refined to prepare educators for their role as instructors of non-cognitive factors and also as stakeholders in the approach and advocates for cognitive and non-cognitive instructional priorities.

Implementation Manuals and Teacher Guides. Teacher guides will model classroom-ready strategies with a focus on providing pedagogical practices, adaptable activities, and approaches to support non-cognitive development in classroom-ready language. Additionally, the guides will provide detailed planning and instructional outlines to support new teachers and—for extended learning, after-school, and camp implementation—community instructors with limited formal training in instruction. The level of detail, background, and supportive notes will facilitate the utility, consistency, and coherence of implementation across contexts.

Measurement Tools. LBS2.0 will adapt and develop teacher and student pre/post surveys to gauge development of non-cognitive skills, critical thinking, and career awareness and aspirations. Rubrics for projects and content areas subjects will help create an *assessment for learning* approach where non-cognitive skills become part of the daily teaching, learning, and evaluation process. We will develop a variety of other formative and summative non-cognitive development measures, and will work with SRI to identify scalable models to collecting FERPA compliant data that meets evidence standards.

Communications tools and processes. LBS2.0 will develop tools and processes for sharing the curriculum and making the goals and outcomes clear for families, educators, and the public.

Because LBS2.0 will be implemented in *every* LBUSD middle school—initially as an elective, with the vision of *all* students taking this course based on the outcomes from this grant—the **utility of these products will be significant.** Further, JFF and LBUSD will scale and spread products from LBS2.0 throughout the state via the CA Career Pathways Trust (CCPT) grantee network, the state's $500 million state investment in 79 regional and local consortia partnerships to develop career pathways. JFF leads the coordination of technical assistance to the CCPT consortia. JFF will also provide opportunities to implement LBS2.0 products in a variety of school settings nationwide through its 12-state *Pathways to Prosperity Network* (PTPN), including after-school/extended learning initiatives, summer bridges, and classroom-based projects—in both rural and urban contexts. PTPN and CCPT partners have expressed interest in using the tools, materials, and approaches that support non-cognitive skills development for young people once LBS2.0 has used and tested them. Consequently, **LBS2.0 has a diverse and eager network to utilize the products** created, tested, and strengthened through this grant.

A.2: LBS2.0 builds upon two existing strategies to develop middle school students' non-

cognitive skills: the Long Beach Scholars (LBS) program and the Possible Futures, Possible Selves (PFPS) curriculum. Over the past two years, LBUSD and JFF have created LBS, a middle school elective course that embeds non-cognitive skills—such as growth-mindset, self-regulation, self-efficacy, communication, and collaboration—within STEM-focused college and career exploration classes. LBS provides sequenced in-school and out-of-school activities with a learning cycle of activity and reflection, and it supports the developmental needs of students as they build future-ready skills and mindsets. In LBS, students are guided through self-exploratory activities and career-focused lessons combined with group tutoring sessions and other teambuilding components. LBS explicitly teaches non-cognitive skills and provides opportunities for students to apply them in context (e.g., a project in which students take on roles of young professionals tasked with applying self-regulation, persistence, critical thinking, and growth mindsets as they collaborate to solve real-world problems in an academically rich project).

PFPS (see Appendix A) serves as foundational curriculum for LBS and LBS2.0, and is being piloted across the country through the PTPN. JFF also leads a national initiative focused on student-centered teaching and learning strategies, ***Students at the Center,*** which has commissioned research from leading scholars addressing such topics as student motivation and engagement, cognitive development, school improvement, and taking effective teaching practices to scale (www.studentsatthecenterhub.org). As the national curator of such resources, JFF has created numerous easy-to-use tools and guides for teachers in order to make research findings "usable" in the classroom. These tools and materials will be adapted for LBS2.0.

In addition to demonstrating and improving the effectiveness of our existing promising strategies, **LBS2.0 will launch new strategies**. These include: formative assessments for students and teachers; a virtual professional learning community and discussion forum focused

on non-cognitive skills; pacing guides for the curricula; additional interactive and innovative projects and field trips; processes and cycle times to collect feedback from all stakeholders to adapt and make mid-course corrections based on data, and to report back to stakeholders; greater exposure to and interaction with both business and industry professionals and adult mentors; and support for educators in utilizing classroom manipulatives, arts materials, multimedia tools and other implements crucial in making curriculum interactive. In addition, LBS2.0 will test the research in Students at the Center against an even more recent body of research on non-cognitive skills in middle school students from the Consortium on Chicago School Research (CCSR).

A.3: LBS2.0 will contribute to the development and advancement of theory, knowledge, and practices for developing non-cognitive skills in middle school students in order to increase student success. In a June 2015 report from CCSR, *Foundations for Young Adult Success: A Developmental Framework,* Nagaoka et. al. outline the three foundational non-cognitive factors for success in early adolescence, namely: ***agency, integrated identity,*** and ***competencies*** (including help-seeking, collaboration, positive communication, and innovation)**—** and the four foundational components that underlie them: ***self- regulation, knowledge and skills, mindsets*** (e.g. growth mindset, self-efficacy)**,** and ***values***. The study "draws upon research, theory, and practice knowledge base from a range of disciplines and approaches, spanning Dewey's theory of learning from nearly a century ago to recent findings from neuroscience on how the brain works, and synthesizes it into an accessible framework designed to guide the efforts of all adults who are responsible for raising, educating, or otherwise working with children and youth" (Nagaoka et. al., 2015, p.1). It also identifies key gaps in the research and practice base which LBS2.0 will help to fill. The challenge that LBS2.0 will address is how to transform these core non-cognitive factors and components into developmental experiences for

young people that support their success. Students must have a secure place to practice their skills, as well learn how to receive and process formative feedback on their progress. Our approach, confirmed by the CCSR framework, focuses on *contextualized* and active experiences balanced with reflective opportunities for young people to process and internalize new ideas and skills. LBS2.0 will also address two other gaps identified by CCSR: 1) identifying which experiences best promote the formation of an integrated identity and agency in middle grades (Nagaoka et. al., 2015, p.82), and 2) the development of tools to measure student progress on the core non-cognitive factors and components (Nagaoka et. al., 2015, p.83-84).

B. QUALITY OF THE PROJECT DESIGN

B.1: LBS2.0 is grounded in Strong Theory—the rationale for this grant incorporates the current research base for non-cognitive skill development, middle school teaching and learning, and STEM project-based learning. Through LBS2.0, we will jumpstart and improve upon the existing LBS program and the PFPS curriculum, integrating and enhancing them through coherent alignment to non-cognitive skills research and practice. The overarching goals for LBS2.0 are to: 1) Implement, evaluate, and refine curriculum, activities, and other products and processes that support high-needs students in middle grades to develop non-cognitive skills and behaviors through STEM project-based learning; 2) Create an evidence and knowledge base about effective strategies and models for middle grades non-cognitive skill development that contribute to improved student outcomes; and 3) Share LBS2.0 products and processes in adaptable formats for different modes of delivery across CA and nationwide. To achieve these goals, LBS2.0 will align the current LBS scope and sequence to emerging research in non-cognitive skills and develop new products and tools to facilitate delivery of non-cognitive skills in multiple settings. The LBS2.0 Theory of Action is embedded in our Logic Model below.

LBS2.0 Logic Model: This serves as a conceptual framework that identifies the key "ingredients" to achieving our outcome

Situation	Inputs	Outputs		Outcomes
		Activities	Participation	
• Non-cognitive skills contribute to student academic and behavioral outcomes • Need for increased, improved strategies to support high-needs students in non-cognitive skills • Inadequate non-cognitive skills development curricula, activities for middle grades • Middle grades need engaging opportunities for *action & reflection* that help build non-cognitive skills, maximized in the context of interactions with others (Nagaoka et al, 2015) • Educators and parents need support to develop the knowledge and skills to create meaningful experiences for youth (Nagaoka et al, 2015)	• LBUSD has high-needs student body and strong district commitment to non-cognitive skills development • LBUSD and JFF expertise and leadership in developing and implementing innovative and successful educational improvement strategies • SRI expertise and national leadership in education evaluation • Strong existing partnerships among LBUSD, JFF, SRI • LBS curriculum • JFF leads statewide (CA) and national education technical assistance networks for sharing best practices • LBUSD experience managing large , significant grants: federal, state, private	• Align current LBS scope and sequence to non-cognitive research (CCSR, 2015) • Create new LBS2.0 lessons, activities and support materials in alignment with report framework and factors • Create an LBS2.0 future-ready portfolio that documents students' actions and reflections across non-cognitive domains and foundational components. • Launch LBS 2.0 in 42 classes across 17 middle schools • Provide ongoing, embedded professional development • Cultivate a professional learning community for teachers focusing on integrating non-cognitive instruction • Integrate LBS2.0 non-cognitive skills curriculum elements into existing LBUSD 8th-9th grade summer bridge transition programs • Document strong practices in video, webinars, case studies, and other resources to model and disseminate emerging best practices • Identify tools and resources that could be adapted to serve in other disciplines and classes (e.g. reflection tools for math, planning and self-regulation tools for ELA, etc.) • Monitor students' progress through data and feedback in order to evaluate program for continuous improvement and to ensure its effectiveness • Document and disseminate program information and results to national audience to promote replication	• At least 510 students per year enrolled in LBS 2.0 in grade 6 • At least 500 students per year enrolled in LBS 2.0 in grade 7 • At least 500 students per year enrolled in LBS 2.0 in grade 8 • At least 35 teachers and staff participate in PD each year • At least 30 teachers and staff participate in a Professional Learning Community • At least 20 staff participate in the Leadership cohort train-the-trainer model • At least 66% of students served are "high-needs" • 90% of enrolled students per year complete course • 90% of enrolled students per year report growth in non-cognitive skills • Summer bridge students across the district (60 students in 6 programs, totaling 360 across three years) • Cross-district sharing of effective practices through presenting LBS2.0 to at least three national conferences, and throughout the state	• Improvement of student outcomes and behaviors • Reduction of key middle school risk factors for participating students (Balfanz, 2009) • An evidence-based suite of tools, products, and approaches to enrich students' non-cognitive skills and success • Development of scalable strategies and models that are applicable to a variety of settings • Sharing of effective strategies and products with other LEAs

The LBUSD's LBS2.0 initiative is striving to make early college and career awareness support a major component of every school's learning outcomes. The idea is to build skill sets in the early grades, in both academic and non-cognitive arenas that will lead to informed decisions by incoming high school freshmen when choosing career pathways. LBS2.0 will be the avenue that the District is utilizing to build a pipeline that extends from middle school through post-secondary opportunities buttressed by hands-on experiences that build resiliency to obstacles facing this generation of prospective college graduates.

LBS2.0 will adapt *Possible Futures, Possible Selves*, as a content vehicle through which middle school students will develop, strengthen, and apply non-cognitive skills both individually and in peer teams addressing real-world problems. JFF's leading middle school expert—a former university STEM instructor, middle school STEM teacher, middle school principal, and LEA (expeditionary learning charter school) director—led the development of this innovative and engaging curriculum, ensuring its alignment with Next Generation Science Standards and Common Core State Standards as well as its utility and adaptability for implementation in classrooms—either integrated into core classes or as a standalone elective—as well as in after-school, camp, and summer bridge settings. The PFPS curriculum is modularized, includes three full years of lesson plans for grades 6 through 8, and balances the active (iterating, exploring, encountering) with the reflective (envisioning, connecting and planning). Over the past two years, LBUSD and JFF used PFPS to create a pilot middle school course, LBS, which de facto integrates non-cognitive skill development within the exploration of STEM careers and developmental activities. This curriculum, funded by the Noyce Foundation, is intended to be scaled nationwide in different contexts; at Noyce's request, a lead writer of the Next Generation Science Standards reviewed the curricula and provided accolades as well as insightful and

detailed feedback that is shaping its current pilot in LBUSD through LBS.

Through this grant, LBUSD and JFF will launch the next generation of LBS, *i.e. LBS2.0*, and will produce core tools, resources and materials that deliberately support the development of non-cognitive skills for middle school students. Research suggests that this strategy will have a positive impact on student outcomes, particularly for high-needs students (CSCC, 2015).

B.2.: LBS2.0 will provide an exceptional approach to both of the Absolute Priorities established for this competition. All tools, products, and processes that we implement, refine, and evaluate for LBS2.0 will focus on **Absolute Priority 1, developing non-cognitive skills in middle-grades students.** LBS2.0 will be enhanced by an additional innovative and exceptional approach: STEM career exploration will be the curricular vehicle through which middle school students develop and apply non-cognitive skills. LBS2.0 will also refine and improve its existing LBS tools and approaches by aligning them with CCSR's new research and non-cognitive developmental framework.

LBS2.0 will advance and achieve LBUSD's school- and district-level improvement strategies. The district targeted middle school career exploration in its recent $6 million state CCPT award, for which JFF provides technical assistance, and non-cognitive skills—framed as work-readiness and "soft" skills—are a primary outcome for the grant. LBUSD also has specific state strategies and goals that LBS2.0 will support (see Section C.3).

Further, **LBS2.0 will share its learnings with other LEAs** through deliberate communications and dissemination, utilizing LBUSD's role as a national exemplar district that serves as a learning site to other districts, and leveraging JFF's numerous education-focused networks—including the 79 CCPT consortia across California, and the 12-state PTPN. JFF's Students at the Center hub is a curated national clearinghouse for research, tools, practices and

approaches, which could host and disseminate promising tools, resources, and practices resulting from LBS2.0 to a national audience. JFF also is developing a middle school-focused website for PFPS, highlighting practices that support career and college readiness on a national level.

LBS2.0 will support High-Need Students, responding to Absolute Priority 2. LBUSD is a majority-minority district, with only 13.9% of student enrollment white in the 2014-15 school year, and low-income students (i.e., those who qualify for free or reduced lunches) make up 66.1% of the total district enrollment. Of the district's 14,146 middle school students, the target students for this grant, which will serve all LBUSD middle schools: 18.92% are English Language Learners (ELL) and 27.01% are former ELLs reclassified as fluent English proficient, 11.65% receive Special Education Services, 11.54% have been retained at least one year (an indicator of being at-risk of not graduating), and 8.0% are homeless or in the foster care system.

B.3: LBS2.0 will provide a substantial addition to an ongoing line of inquiry in non-cognitive skill development and influence on student success. SRI conducts objective impact evaluations designed to assess how well a program or policy is meeting its goals. As our designated evaluation partner, SRI will utilize qualitative and quantitative data gathered at the district and site levels to create a comprehensive and quality evaluation that will include measuring positive growth of student achievement indicators such as GPA and standardized tests. SRI will also measure the impact of LBS2.0 on student non-cognitive outcomes and the fidelity of program implementation. The research and evaluation of LBS2.0 will thus substantially contribute to the growing body of research and evidence in this area.

Over the past five years, JFF has partnered with Jenny Nagaoka, the Deputy Director of CCSR and the lead author of the recent seminal report on non-cognitive skills, *Foundations for Young Adult Success: A Developmental Framework* (CCSR, 2015). Nagaoka was also an author

of the 2012 CCSR report, *Teaching Adolescents to Become Learners: The Role of Noncognitive Factors in Shaping School Performance* that is cited in the Funding Opportunity Description Skills for Success RFP. LBS2.0 will use the new CCSR non-cognitive Framework to guide the alignment of curriculum, tools, and other resources into a coherent program that will advance the research base and help to develop a practice base in these areas. CCSR specifically researched the non-cognitive developmental needs for middle grades students, which they refer to as "early adolescence" (ages 11-14). For middle school students, a sense of belonging and group cohesion is paramount, and peer social context is highly influential and important, as it drives the development of young people's mindsets and values (CCSR, 2015). As a result, the two primary areas of non-cognitive development in the middle grades are:

- *Group-based identity development* is critical because early adolescents "are continuing to develop abstract thinking and focusing more on the comparison of the self to others. These developments allow for further refinement of *self-awareness* and *executive function skills*, including *self-regulation*, *metacognition*, *setting goals for oneself*, and the *application of learned strategies*, all of which support the achievement of academic, social, and personal success" (CCSR, 2015, p.70).
- *Emerging mindsets* shape middle school students' self-esteem and self-efficacy. In this developmental stage, "this materializes into a more articulated distinction between ability and effort, or 'not working hard enough' and 'not being smart enough.' Over time, young teens begin to develop a "fixed" mindset (as opposed to a growth mindset); that is, they tend to attribute performance increasingly to ability, or at least to see ability as a more formidable constraint on their performance" (CCSR, 2015, p.69). Because middle schoolers are so preoccupied with their social context, they may start to develop "behaviors and strategies to

avoid failures—devaluing challenging tasks, self-handicapping, and withdrawing effort altogether" (Farrington et al., 2012, p. 56).

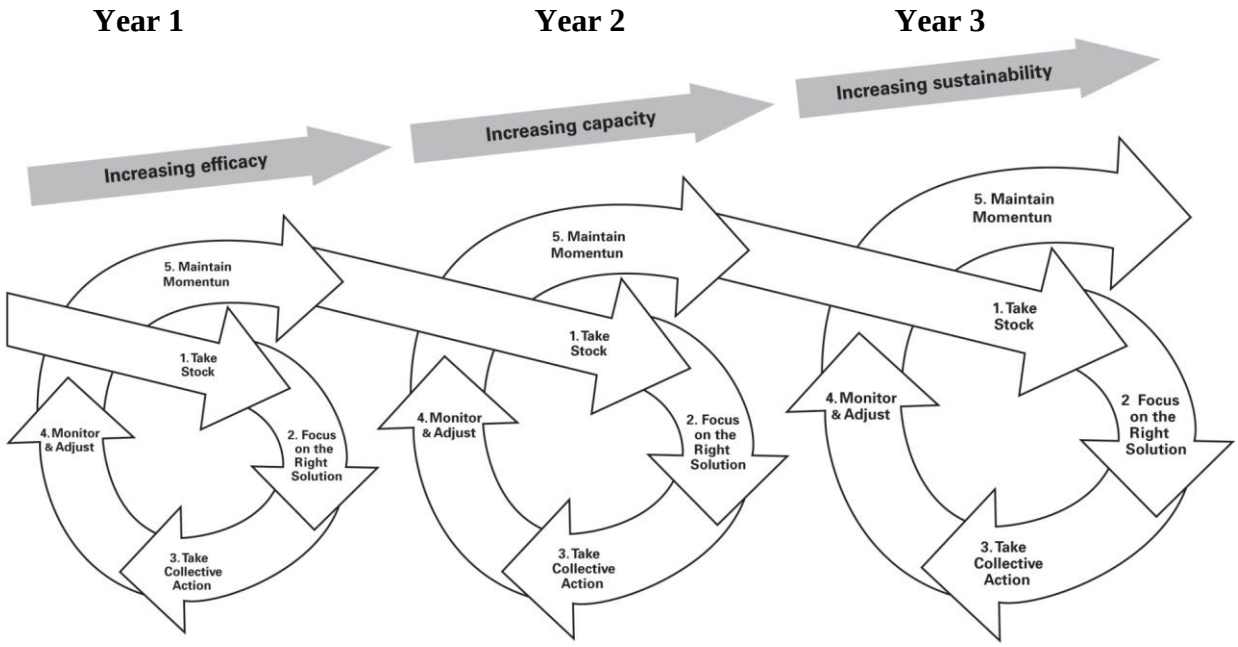
LBS2.0 will address both of these research-based middle school non-cognitive developmental areas through its interactive, team approach to STEM project-based learning with peer engagement and feedback, as well as through its emphasis on integrating instructional cycles of learning, doing, and reflecting, as outlined in the figure above (source: CCSR, 2015, p.12). The CCSR framework-aligned and coherent curriculum, teacher guides, activities, professional development, and other tools and products created through LBS2.0 will advance the field in its knowledge of and implementation capacity for non-cognitive strategies in teaching and learning to improve student outcomes, particularly for high-needs students.

B.4. Performance feedback and continuous improvement are integral to the design of LBS2.0. Just as students will be working on giving and receiving constructive peer performance feedback, so too will teachers engage in peer feedback processes to problem-solve, identify successful practices, and improve the content and pedagogy. This will be integrated into the ongoing, embedded LBS2.0 professional development and the professional learning community (see management plan in section C.2). LBS2.0 leadership, partners, and teachers will also use data and feedback to guide twice-yearly improvement institutes (see section C.1).

C. QUALITY OF THE MANAGEMENT PLAN

C.1: LBS2.0 will implement a comprehensive and multilayered system for ensuring feedback and continuous improvement throughout the grant's operation. LBS2.0 will follow a research-based improvement cycle to increase the efficacy, capacity, and sustainability

of the intervention (see below). The improvement cycle depends on data collection against established achievement indicators; district and school leaders will ensure that data is gathered by project managers and evaluation partners to enable on-going monitoring and adjustment, and stock-taking as in the model below. Importantly, LBS2.0 will draw upon LBUSD's effective and structured management systems already in place, which include infusing accountability measures into the monthly Principal meetings and quarterly AP meetings. To provide quick district-wide visibility for the project, the project will be spotlighted at monthly staff meetings.



(Source: McREL, 2014, http://ow.ly/Q5eQ4)

District Level Staffing and Responsibilities: The **Assistant Superintendent** of Middle Schools will provide **direct oversight of the grant**; he will use a substantial portion of his already established bimonthly meetings with Assistant Principals to monitor progress, trouble-shoot, and ensure fidelity of implementation. He will ensure that data on achievement indicators is collected in a timely manner for program assessment and grant evaluation purposes. A full-time **Program Coordinator** will serve as the **liaison between district-level managers, project**

partners (JFF and SRI), and on-site personnel, including assistant principals and teachers. This Coordinator will ensure student and teacher evaluation tools are administered according to pacing guidelines. S/he will **administer and manage the following feedback/data-gathering processes**: *Monthly online teacher surveys*; *Quarterly professional development* work sessions; *Weekly student feedback protocols* embedded in the curriculum (i.e. exit slips, quick writes, binder check and focus groups); *Future-Ready Portfolios*: LBS students will contribute to a career portfolio that includes examples of progress on non-cognitive skill development, evaluated utilizing student rubrics; *Student evaluations* developed by SRI; and *In-person site visits and observations* from the LBS program coordinator for unscheduled feedback.

On a quarterly basis, the Coordinator will **disseminate data to evaluation partners** and synthesize it into **LBS2.0 progress reports** for review by principals, district managers, JFF, and other interested parties. The Coordinator will also assist in leading quarterly professional development for LBS teachers in addition to providing onsite support to participating schools in planning interactive projects and scheduling college and career experiential visits.

In 2014, LBUSD launched a cutting-edge online Professional Learning Management System called ***MyPD*** that allows teachers and staff to access training modules through a single portal. LBUSD will feature LBS2.0 curriculum components, products, and teacher evaluation tools through this system to facilitate broader access to and training on emerging effective practices in non-cognitive skill development and middle school student success, as well as to ensure **ongoing input and feedback** from educators, including beyond those participating in the grant.

School Level Staffing and Responsibilities: Assistant Principals will be the **onsite points-of-contact**, and will manage **quarterly program review** sessions with teachers. **Teachers** will lead the **student feedback processes** using detailed pacing guides. The LBS2.0 curriculum will

be designed to **gather student feedback on a weekly basis,** employing research-based formative assessments developed through the CCSSO Innovation Lab project (CCSSO, 2011 and ongoing). All LBUSD teachers are trained in this assessment strategy. As the project ramps up, LBUSD will use their well established method for the Collaborative Inquiry Visit (CIV) to carry out non-evaluative walk-throughs of the implementing sites. These involve not just school site personnel but district staff, and staff from other schools, who observe classrooms concentrating on the instructional strategies, common core implementation and the four understandings. Observers provide feedback, and these walks include protocols to help them look for evidence of *non-cognitive skill lessons and associated behaviors.*

Improvement Institute: Twice yearly—in December and May—district and school leadership with JFF will conduct an **LBS2.0 "stock-taking" and improvement institute** to analyze the following: student data, student and teacher feedback, samples of student work, and notes from quarterly program review sessions to identify process and content gaps as well as effective strategies and activities. This continuous and multilevel operation of feedback will ensure that the project is on track to meet achievement indicators and will develop mechanisms for correction and alternative strategies to be deployed if they are not.

In addition, JFF staff will provide ongoing technical assistance and coaching to LBUSD Coordinator and teachers to support their ongoing improvement, and SRI's researchers will conduct an objective impact evaluation to assess how well the program is meeting its goals.

C.2: LBS2.0 will achieve its objectives through careful adherence to the budget and the management plan activities, responsibilities, timelines, and milestones, as delineated below. Grant funds will be managed by LBUSD central office, and all expenditures will be approved through the district's standard request process, requiring review of grant budget and management

plan before disbursement. LBUSD will generate monthly budget reports to monitor output and ensure that the spend-down is aligned to the proposal and the grant needs.

LBS2.0 MANAGEMENT PLAN

Task/Activity	Entity Responsible	Timeline	Milestone Marker
Meet with Assistant Principals (APs) and teachers to review grant narrative, goals, timelines, data collection needs	LBUSD Asst. Supt. (AS), with JFF participating in person or virtually	Month 1	Meeting agenda, notes
Hire LBS2.0 LBUSD Program Coordinator (PC)	LBUSD	Month 1	Job description, staff hire
Hire LBS2.0 JFF Program Manager (PM)	JFF	Month 1 or 2	Job description, staff hire
Meet with SRI to finalize data systems, processes, and reporting schedule	LBUSD AS and PC; JFF Senior Program Manager (SPM) and PM; SRI team	Month 1 or 2	Evaluation data plan finalized
Create communication plan and resources for informing parents/students about LBS2.0	LBUSD PC, with JFF PM assisting	Month 2	Informational materials, plan for outreach
Develop and administer student pre-survey; collect any other needed baseline data	LBUSD PC, with SRI	Month 2	Surveys and survey results, baseline data
Develop and administer LBS2.0 teacher survey (likely online, e.g. via SurveyMonkey)	LBUSD PC	Month 2, monthly thereafter	Surveys and survey results
Create non-normative classroom observation rubric	JFF SPM and PM, with LBUSD PC	Month 2	Rubric in place
Create and administer student feedback mechanisms through formative assessments	LBUSD LBS2.0 teachers	Month 2, weekly thereafter	Formative assessment process, feedback
Conduct classroom site visits and observations	LBUSD PC, with JFF PM when possible	Month 3, monthly thereafter	Site visit logs, completed observation rubrics
Collect LBS2.0 data and feedback from teachers and other identified stakeholders	LBUSD PC	Month 3, monthly thereafter	Data and feedback logs and checklists
Meet with APs to discuss program needs	LBUSD AS	Month 3, bimonthly thereafter	Meeting notes and resulting follow-up supports
Send SRI quarterly data; create and disseminate LBS2.0 progress report to stakeholders	LBUSD PC, with JFF PM assistance if needed	Month 3, quarterly thereafter	Data provided to SRI, progress reports
Stock-taking and improvement institute	LBUSD district/school leadership and PC, JFF SPM, PM, SRI (invited)	Month 3; every May and Dec.	Agenda, participant list, notes on outcomes and next

		thereafter	steps
PD institute with teachers to revise/improve/create LBS2.0 products and processes	JFF SPM and PM, with support from LBUSD PC	Month 4, quarterly thereafter	Agenda, participant list, content provided, work plans
Develop and launch teacher virtual peer professional learning community	LBUSD APs, with support from LBUSD PC and JFF PM	Month 4, monthly thereafter	Interactive online platform, evidence of regular use
Develop and launch quarterly student surveys and/or focus groups on LBS2.0 progress	LBUSD PC and LBS2.0 teachers	Month 4, quarterly thereafter	Survey/focus group questions, summaries
As-needed, customized professional development, coaching, and technical assistance	JFF	Through-out the grant as needed	Documentation summarizing services
Annual evaluation: analysis of quantitative and qualitative data, progress on goals	SRI with LBUSD PC	Annually	Written summary of program results
Revise LBS2.0 curricula, tools, processes, products as needed	JFF SPM and PM, with LBUSD PC assistance	Annually	Written curriculum and other products
Present LBS2.0 at State and National conferences	JFF, LBUSD	Annually	Presentation slide decks
Establish "Best Practices" through publication in educational journal	JFF	Year 3	Journal article
Sustainability Planning	LBUSD, JFF	January, Year Four	Written staffing and funding plans
Final LBS2.0 Institute, celebration	LBUSD, JFF, SRI	June, Year 4	Agenda, participant list, media

C.3: Each of the LBS2.0 partners brings deep expertise, a history of working together, and commitment to the goal of improving the non-cognitive skills of middle schoolers. JFF and LBUSD have partnered for two years to develop and pilot LBS. JFF also worked earlier with the district as it structured its high schools into Linked Learning pathways and worked to build in work-based learning experiences. LBUSD targeted middle school career exploration in its $6 million state CCPT grant for which JFF provides technical assistance.

The grant lead, **LBUSD** sees LBS2.0 as closely aligned and enhancing the district's five-year strategic plan to ensure college and career readiness for all students. **LBS2.0** also is important to LBUSD's Local Control Accountability Plan, which requires an annual action plan be submitted

to the State, mapping specific categories of student growth targets including non- cognitive skill development. Targets include: *an annual increase of 3% in middle school students enrolled in at least one elective class; an increase of 1% on the School Culture and Climate Survey already in use in LBUSD; and greater access to middle school elective classes*. LBS2.0 also aligns with LBUSD's required Graduate Profile; an LBUSD graduate is a College and Career-Ready Scholar, a Critical and Innovative Problem Solver, an Adaptable and Productive Citizen, an Ethical Decision Maker, and an Effective Communicator and Collaborator.

JFF works in over 200 communities in 43 states to improve pathways leading from middle school to high school, to college, and to family-sustaining careers. Since its founding in 1983, JFF has helped to design, develop, and expand designs that expand educational and career opportunity for low-income and underserved young people. JFF's achievements include: the development of the early college high school initiative; extensive practice and policy development to reengage out-of-school youth; work to improve access, retention, and completion in postsecondary education; and as noted earlier, its leadership of the 12-state Pathways to Prosperity Network focused on building systems of career pathways to college, and of Students at the Center, the national initiative focused on student-centered teaching and learning strategies.

SRI is well-equipped to carry out the evaluation, and LBUSD is familiar with their rigorous methodology since they are the evaluators of Linked Learning, a proven approach to integrating rigorous academics with career-focused learning, funded in nine California districts by the Irvine Foundation. LBUSD is the state's strongest Linked Learning district exemplar with wall-to-wall Linked Learning career pathways in high schools (www.linkedlearning.org). Assessing areas such as identity formation, resiliency and future time prospective is still a challenge for educators and researchers, and SRI takes this on with a commitment to design developmentally appropriate

assessment tools and making a cutting edge contribution to a challenging field urgently in need of an integral body of knowledge on how to evaluate non-cognitive assets and to ensure that young people can meet learning targets for these skills so critical to productive adulthood.

D. QUALITY OF THE PROJECT EVALUATION

SRI will lead an independent evaluation of LBUSD's LBS2.0. The study proposes using a within-school matched comparison design to estimate the effect of the intervention on student achievement and non-cognitive outcomes. This summative evaluation, if executed as designed, **will meet What Works Clearinghouse standards with reservations**. Data sources will include measures of student outcomes and fidelity of implementation (listed in Exhibit 1, below) to **examine the effectiveness of LBS2.0 implementation strategies**. Findings will be shared through annual reports and regular project briefings. These **regular briefings will give LBUSD and JFF the data and performance feedback necessary for periodic assessment of progress**, to support implementation of their model with fidelity, and to **guide strategies for replication work in other settings**. SRI will address the following research questions (Exhibit 1):

Exhibit 1: Research Questions and Data Sources	Interview/ Focus Group	Survey	District Extant Data	Application and Participation Data
Implementation and replication				
To what extent was LBS2.0 implemented with fidelity?		●	●	●
What contextual factors impeded or enhanced the implementation of LBS2.0?	●	●		●
To what extent did LBS2.0 recruit and retain students from its target population?	●		●	●
Outcomes				
What was the impact of LBS2.0 on student achievement?		●	●	●
What was the impact of LBS2.0 on student non-cognitive outcomes?		●	●	●

Implementation, Replication, Sustainability, and Formative Assessment. Qualitative data collection will focus on the policies and practices shaping student recruitment for and instruction in LBS2.0 at LBUSD middle schools, perceptions of LBS2.0 implementation, supports and barriers, and perceived outcomes. Annual interviewees will include key curriculum developers, professional development staff, and study teachers. Additionally, SRI will conduct annual focus groups with students who enroll in LBS2.0; these focus groups will focus on program experiences (e.g., experiential activities, course curriculum, available supports) and perceived outcomes (e.g., career awareness, informed choice of high school pathways, identity development, etc.). SRI researchers will conduct interviews using semi-structured protocols. The data will inform formative feedback to LBUSD to help ensure project implementation, identify factors that support teachers' implementation of LBS2.0 curriculum and experiential activities, and describe facilitators and barriers for replicating LBS2.0 in new grades, schools, and districts.

Using a semi-structured observation protocol, SRI researchers will observe a sample of the LBS2.0 classes as part of annual site visits. These observations will assess the extent to which the program, as delivered, reflects the model in terms of the content foci and instructional practices it promotes (e.g., project-based learning integrating STEM and non-cognitive skill development). SRI will triangulate the observations with teacher reports of PD, curriculum materials, and instructional practices to better understand the implementation of LBS2.0.

SRI will analyze enrollment data annually to inform LBUSD staff regarding patterns of student enrollment and retention, with a particular eye towards the extent to which LBS2.0 enrolls and retains its target student population (i.e., high-needs students) from 6th–8th grade.

SRI will share implementation data and formative feedback through regular project meetings and an annual report.

Overview. LBUSD will implement LBS2.0 in approximately 51 classes across 17 middle schools in LBUSD. LBS2.0 will serve at least 30 students per grade, per school, per year. Implementation will begin with grade 6 in the 2015–16 school year and progress to grades 7 and 8 in subsequent school years. The evaluative focus will be on 6th graders in Year One, 6th and 7th graders in Year Two (2016-17), and all three grades in Year Three (2017-18). We present an analysis plan that assumes the dominant enrollment pattern for students is continuous enrollment in all three grades. If such an enrollment plan holds, then an intent-to-treat design (i.e., one that assigns treatment status according to initial enrollment) minimizes selection bias (Fisher, et.al., 1990; Murnane & Willet, 2010). Further, this design allows for the estimate of a single, confirmatory program effect incorporating the program's cumulative impacts on students over three years of exposure to intervention, thereby negating the need for multiple comparison corrections. SRI will monitor program enrollment data annually and revise the planned design if students do not follow this enrollment plan.

Outcome measures. SRI will use student extant data and student survey data collected by LBUSD staff as measures of student academic and non-cognitive outcomes. Student 6th–8th grade academic GPA will serve as the primary (i.e., confirmatory) outcome measure for this evaluation. GPA reflects not only academic content knowledge, but also important non-cognitive factors related to student academic behavior and mindsets (e.g., attendance, participation, perseverance; Farrington, 2012). Student GPA will be calculated using only classes taught in the primary academic disciplines to exclude both the LBS2.0 class and the alternative elective classes taken by the comparison group. Given that the study design matches students within schools and on demographics and prior achievement (see below for outcome study design), teacher-assigned grades should be collected in the same manner across treatment and control

students and therefore meet What Works Clearinghouse standards (2013).[1] SRI will monitor differences between treatment and control students in course-taking patterns and class enrollment to ensure these assumptions hold and adapt analysis plans accordingly if they do not. SRI will calculate outcome reliability using a Chrombach's alpha score to demonstrate internal consistency between course grades for individual students. SRI will also conduct exploratory analyses to estimate the impact of LBS2.0 on individual grade and year GPAs to gain a more nuanced understanding of the program's impacts throughout implementation.

Students' 6th–8th grade Smarter Balanced assessment scores in both ELA and math will serve as an additional exploratory measure of academic achievement. Additionally, SRI will use student survey data collected by Long Beach as an outcome measure. SRI, LBUSD, and JFF will collaborate to choose a survey instrument that has demonstrated reliability and measures outcomes aligned to the intervention (e.g., career awareness, informed choice of high school pathways, identity development, etc.). LBUSD and JFF identified the Developmental Assets Profile as a potential instrument (2004; test-retest reliability .74; α=.97). Such survey instruments come with significant limitations (Nagaoka, et.al., 2015). As such, SRI will continue

[1] To be eligible for WWC review, an outcome must (1) demonstrate face validity and reliability; (2) not be overaligned with the intervention; and (3) be collected in the same manner for both intervention and comparison groups. WWC3.0 guidelines specify that "[g]enerally the WWC does not consider grades or grade point average as eligible for review because criteria may differ across teachers, schools, or districts." (p. 17) Given that students are matched within schools and taking similar, if not identical, classes, this design avoids this particular concern. If WWC reviewers chose to not accept this outcome measure, this evaluation will still have Smarter Balanced assessment scores, providing an alternative WWC-eligible outcome measures.

to monitor the literature during the course of the study to take advantage of any advances in the measurement of non-cognitive outcomes during the study time period. Additionally, the within-school comparison design will mitigate the concern of reference bias introduced when comparing students in different schools (Duckworth & Yeager, 2015).

Impact estimates. SRI will use propensity score stratification to estimate the impact of LBS2.0 on student GPA, test scores, and survey outcomes. The propensity score refers to the conditional probability of being in a treatment group—in this case, being in LBS2.0 in the 6th grade—based on a set of observed covariates (e.g., prior achievement, demographics). The propensity score will be obtained through a logistic regression model; the score is a single composite indicator that appropriately summarizes the set of covariates (Rubin, 1997). Matching on the propensity score will help identify comparison students who are similar to LBS2.0 students on many outcome-related characteristics.

To maximize the comparability of matched LBS2.0 and comparison students, we will include in the propensity score model a broad set of student demographic variables, such as gender, ethnicity, subsidized lunch program status, and English learner status and students' 5th-grade GPA and Smarter Balanced assessment scores in ELA and math. Students will be matched to similar students within the same middle school.[2] We will stratify students based on propensity

[2] Prior research suggests that the use of local comparison groups in propensity score matching improves results so that they more closely approximate random assignment results (Michalopoulos, Bloom, & Hill, 2004). An exact match on middle school attended will also address concerns listed in the WWC standards relating to using GPA as an outcome variable, as discussed above. Since all district middle schools will offer LBS2.0, and students typically attend

score quintiles in conducting outcomes analyses (For examples using these approaches, see Hoffer, 1992; Hong & Raudenbush, 2005; Reardon, Cheadle, & Robinson, 2009.). We will conduct our analyses using two-level hierarchal linear (HLM) models with random effects at both the student and school level. These HLM models will account for the clustering of students with schools and point estimates for the different sample sizes of clusters, thus minimizing Type I error associated with nested models. For all outcome analyses, SRI will test for baseline equivalence in the analytic sample using a measurement aligned to the outcome of interest (e.g., 5th grade GPA) to ensure balancing on baseline covariates to meet WWC standards. No outcome data will be imputed and no significant confounds exist. All data will be analyzed according to standards set by WWC at the time of analysis. We estimate an MDES of .11 on models examining Smarter Balanced math scores and between .12–.15 for Smarter Balanced ELA scores.[3]

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their local middle school, there is no reason to believe that treatment condition and middle school attended would be conditional upon treatment.

[3] MDES is calculated using a two-level model, assuming the top level N is 16 middle schools and an average of 30 LBS2.0 and 30 comparison students in each school. We use estimated ICCs and R^2s from Hedges & Hedberg (2007) . For math, we used 8th grade estimates (ICC=.106, η_B^2=.179, η_W^2=.340). For ELA, this paper does not provide 8th grade estimates, so we calculated one MDES using 6th grade estimates (ICC=.025, η_B^2=.089, η_W^2=.578) and another using 9th grade estimates (ICC=.322, η_B^2=.575, η_W^2=.525).