School District of Palm Beach County
STEM Investigation Lab
21st Century Community Learning Centers
Extended Learning time Initiative

Summative Evaluation Report
2013-2014

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The Need for Quality Extended Learning Time Programming

Extended Learning Time (ELT)

Over 30 years ago, the National Commission on Excellence in Education published ***A Nation at Risk: The Imperative For Educational Reform***, wherein the standard 6-hour school day and 180 day school year were challenged as contributing to the failure of the American education system. Within the report, the commission called for school districts and State legislatures to "strongly consider 7-hour school days, as well as a 200- to 220-day school year." This report provided, among many other reform suggestions, important kindling to the concept of extending the school day in America's schools and sparked over 30 years of debate about "time and learning." While the logic behind extended learning time appears sound (i.e., more time spent on instruction equals more learning), the programing provided during the extended learning time must be well-planned and carefully executed to be effective and have the greatest impact on the overall student population.

Within Florida, the need for extended learning time became a focus in 2012 when the Florida Department of Education mandated the 100 schools with the lowest reading performance to extend their school days by one hour, specifically for additional reading time for all students. The extended learning time model in Florida was rather successful, with many of the 100 lowest performing schools improving their reading scores, largely due to the extended learning time. Several schools retained the extended learning time in the 2013-2014 academic year, even without the mandate from the Florida Department of Education. Indeed, national research shows that students who attend under-performing schools that have longer school schedules for targeted academic support achieve at higher levels than students who are not exposed to additional learning time. Extended Learning Time (ELT) provides a greater opportunity for school districts and schools to develop school-wide instructional strategies that align core academics, enrichment, and family engagement with instructional goals and desired outcomes.

In general, extending learning time has gained traction as a strategy for improving equity and narrowing achievement gaps. There is evidence that "summer learning

loss" impacts low-income students much more than wealthier students – and that extra time significantly benefits struggling students (Alexander, Entwisle & Olson 2001). While middle-class and wealthy families can afford arts, sports, and music lessons outside of school, low-income students often lack access to such opportunities, and many students spend hours unsupervised between the end of the school day and the end of their parents' workday. Extended learning time advocates have come to focus on additional time as a tool for redesigning the whole school day to equalize access to well-rounded curricula and enrichment activities.

Extended learning time can mean many things and take many forms. At its simplest, extended learning time involves adding minutes or hours to the school day or adding days to the school year. Other approaches rely on out-of-school-time providers like afterschool programs and/or integrating in-school and out-of-school programming through community school models. However, there is little research that shows that simply adding minutes or days can improve achievement. Most data on time and learning is correlational, and there have not been experimental or longitudinal studies (Aronson, Zimmerman & Carlos 1998; ECO Northwest & Chalkboard Project 2008). One issue is the challenge of distinguishing "academic learning time" – time on-task, during which students are fully engaged in learning – from time spent on classroom management, administrative tasks, or ineffective instruction (Cuban 2008; Patall, Cooper & Ellen 2010). While increased academic learning time can improve achievement, some studies estimate that time on-task makes up less than half of the average school day (ECO Northwest & Chalkboard Project 2008). This has prompted some skeptics of extending learning time to argue that making better use of existing time is of primary importance.

However, when extra time is carefully targeted to certain activities, it has been shown to improve student learning, especially for students most at risk of failure (Patall et al. 2010). Studies of high-performing charter school networks attribute a large part of their success in raising achievement to longer school days and years, with the extra time carefully targeted to small-group tutoring and intensive student support (Hoxby, Murarka & Kang 2009; Dobbie & Fryer 2011). Ultimately, extended learning time can be a powerful tool in improving student and family outcomes when it is thoughtfully used to deepen instruction in core subjects, increase enrichment opportunities, and support socio-emotional development.

As per the United States Department of Education, high-quality Extended Learning Time (ELT) might include: (1) Using the additional time to increase learning time for

all students in areas of need; (2) Using the additional time to support a well-rounded education that includes time for academics and enrichment activities; (3) Providing additional time for teacher collaboration and common planning; (4) Partnering with one or more outside organizations, such as a nonprofit organization with demonstrated experience in improving student achievement; (5) Redesigning the whole school day to use time more strategically, especially in designing activities that are not "more of the same"; (6) Providing evidence-based activities and programs; (7) Personalizing instructional student supports; (8) Using data to inform ELT activities and practices; and (9) Directly aligning ELT activities to student achievement and preparation for college and careers.

THE 21ST CCLC INITIATIVE

The national need for structured afterschool programming spawned the creation of the 21st Century Community Learning Centers (CCLC) initiative in 1994, when the U.S. Congress authorized the establishment of the federal afterschool programs. In 1998, the 21st CCLC program was refocused on supporting schools to provide school-based academic and recreational activities during after school hours, summer, and other times when schools were not in regular session. The development of the *No Child Left Behind Act of 2001* brought further political focus and federal funding to after school programs, which signified the beginning of federal funding aimed at directly addressing the need for after school programs in a systematic manner. Total federal funding began with $750,000 in 1995 and grew to approximately $1.2 billion dollars in 2013 (United States Department of Education, 2012).

The 21st Century Community Learning Center (21st CCLC) initiative, as outlined in federal law under the "No Child Left Behind Act" of 2001, is an opportunity for students to enhance and reinforce academic lessons of the regular school day, while also allowing them to learn new skills and discover new opportunities after the regular school day has ended. As described by the US Department of Education:

> *The focus of this program, re-authorized under Title IV, Part B, of the No Child Left Behind Act, is to provide expanded academic enrichment opportunities for children attending low performing schools. Tutorial services and academic enrichment activities are designed to help students meet local and state academic standards in subjects such as reading and math. In addition 21st CCLC programs*

> *provide youth development activities, drug and violence prevention programs, technology education programs, art, music and recreation programs, counseling, and character education to enhance the academic component of the program.*

Authorized under Title IV, Part B, of the Elementary and Secondary Education Act (ESEA), as amended, the specific purposes of this federal program are to:

(1) provide opportunities for academic enrichment, including providing tutorial services to help students, particularly students who attend low-performing schools, to meet State and local student academic achievement standards in core academic subjects, such as reading and mathematics;

(2) offer students a broad array of additional services, programs, and activities, such as youth development activities, drug and violence prevention programs, counseling programs, art, music, and recreation programs, technology education programs, and character education programs, that are designed to reinforce and complement the regular academic program of participating students; and

(3) offer families of students served by community learning centers opportunities for literacy and related educational development.

Since the inception of the federal 21st CCLC initiative, Florida's 21st CCLC programs have been among the most structured and diverse out-of-school programs for students attending Florida's low-income, Title I school-wide-program-eligible schools. In essence, 21st CCLC programs provide structured, academically-focused, safe learning environments for students during non-school hours. The programs include a wide variety of wrap-around services and activities for students and family members.

BENEFITS OF 21ST CCLC PROGRAMMING

Research on the benefits of extended learning opportunity (ELO) programs is generally limited to highly structured programs, such as 21st CCLC. While not all benefits translate to the 21st CCLC ELT program, it is important to note the known benefits of 21st CCLC ELO programs. With this caveat, research often shows a number of positive impacts on children and families, often depending on the types of activities offered. Many studies have shown that children in out-of-school programs have a reduced incidence of juvenile delinquency, violence, and drug use. In addition, research has shown the following benefits of participation in a high-quality program:

- Gains in academic grades, standardized test scores, and quality of school work.
- Improved motivation and dedication to school and learning.
- Enhanced creativity and interest in school.
- Improved in-school behaviors and greater self-reported control over behaviors.
- Reduced stress for students and parents.
- Improved self-esteem, self-efficacy, and greater hope for the future.
- Improved well-being, improved physical fitness, and decrease in obesity.
- More connection to the community (particularly with service learning).

Afterschool programs can also offer many intangible benefits, such as the opportunity to engage in activities that help children realize they have something to contribute; the opportunity to work with diverse peers and adults to create projects, performances, and presentations; and the opportunity to develop a vision of life's possibilities that, with commitment and persistence, are attainable.

ELT AND 21ST CENTURY COMMUNITY LEARNING CENTERS

In seeing the aforementioned outcomes of afterschool programs and the promises of the Extended Learning Day model, the United States Department of Education allowed states receiving flexibility under the Elementary and Secondary Education Act (ESEA) of 1965, as amended, the option to request a waiver which would allow community learning centers to carry out 21st CCLC program activities during school hours or periods when school is in session (i.e., not restricted to before school, after school, weekends, and summer). As such, one of the goals of the 21st CCLC program became to provide academic and enrichment activities for students who would benefit most from Extended Learning Time. Florida requested and received this waiver, thus allowing an eligible entity to use 21st CCLC program funds to support ELT during the school day, in addition to activities during non-school hours or periods when school is not in session. As defined for purposes of flexibility under the ESEA, ELT is the time that a local educational agency or school "extends its normal school day, week, or year to provide additional instruction or educational programs for all students beyond the State-mandated requirements for the minimum number of hours in a school day, days in a school week, or days or weeks in a school year." Regardless of the waiver, all recipients of 21st CCLC funding to operate during the school day in support of the ELT initiative must still meet all 21st CCLC requirements. Indeed, the optional 21st CCLC waiver, as requested under ESEA flexibility, only affects when

services provided with 21st CCLC funds may be delivered. Absent ESEA flexibility waiver, 21st CCLC services must be provided outside the regular school day.

The Florida Department of Education restricted applicants for 21st CCLC ELT sub-grants to agencies who meet the following criteria: (1) the schools must be eligible for Title I School-Wide Program (40%+ Free/Reduced Price Lunch); (2) the schools must have received a grade of "D" or "F" in the prior year; and (3) the schools must be required by the FDOE or school district to provide at least one additional hour or additional days of instruction beyond the regular school day or year (in the case of Charter Schools, the district-approved charter must establish the additional time).

All other provisions of the 21st CCLC program remain unchanged, including the allocation of funds to states by formula; the requirement that states use 95 percent of their State formula grants to make competitive sub-grants; the requirement that states give priority to partnerships between LEAs receiving Title I, Part A funds and CBOs or other public or private entities; the supplement-not-supplant requirement; and the entities eligible to compete for sub-grants. Section 4203 of the ESEA requires that states make awards only to eligible entities that propose to serve (a) primarily students who attend schools eligible for school-wide programs under section 1114 or schools that serve a high percentage of students from low-income families; and (b) the families of the students to be served by the program. In addition, the requirement to provide equitable services to eligible private school students in Section 9501 of the ESEA may not be waived.

The 21st CCLC ELT sub-grants could be used to carry out a broad array of activities that align to schools' instructional priorities and advance student academic achievement. Examples include: (1) time for additional core academic instruction including English, math, science, and social studies; (2) individualized academic intervention or acceleration based on an ongoing analysis of student achievement data (e.g., remedial education activities and academic enrichment learning programs); (3) programming that provides limited English proficient student supports to emphasize language skills; (4) engaging enrichment programming such as art and music education activities, technology education, health and wellness programming and programming that supports the development of a strong school culture of high expectations and academic achievement; (5) programs that promote community and parental involvement; and (6) programming that allows teachers and partnering staff to meet regularly for professional learning focused on improving instruction and data analysis to improve academic achievement and student engagement.

In addition to federal requirements, the Florida Department of Education required all applicants for the 21st CCLC ELT sub-grants to provide activities that helped support Florida's Annual Measurable Objectives (AMOs). Under the ESEA flexibility waiver, which allows the use of 21st CCLC funds to support extended learning time, Florida's AMOs are: (1) School Grade: Provides a comprehensive overview of the performance of the school, including subgroup proficiency and student learning gains; (2) Increase Student Performance in Reading and Mathematics: Focuses schools on increasing the proportion of students scoring at levels 3 and above and reducing the proportion of students scoring at levels 1 and 2 by 50% over six years; (3) Adequate Progress of Students in the Lowest-Performing 25% in Reading and Mathematics: Includes overrepresentation of specific subgroups that are low-performing and focuses schools on raising their achievement and reducing achievement gaps; and (4) Comparison of Florida's Student Performance to the Highest Performing States and Nations: Compares NAEP outcomes for reading and mathematics in grades 4 and 8 to the scores from the top five states.

As per the Florida Department of Education Request for Proposal: "21st CCLC activities may be carried out at any point in time during an expanded school day, week, or year. For example, if an LEA lengthens its school day beyond the state minimum, the LEA or another eligible entity might use 21st CCLC funds to provide supplemental science, reading, art instruction, or other supplemental academic enrichment activities to students in the morning or afternoon to allow teachers time to collaborate or plan. Similarly, if a district mandates an expanded school week, then the LEA might work with a community partner to use 21st CCLC funds to incorporate enrichment activities, such as debate or college preparation, on either a Saturday or a weekday. Using 21st CCLC funds to support expanded learning time should not be just "more of the same;" it should involve careful planning by the eligible entity to ensure that the programs or activities will be used to improve student achievement and ensure a well-rounded education that prepares students for college and careers. Core academic subjects must be integrated using problem- or project-based learning that is creative, hands-on, fun, and designed to foster a love of reading, science, technology, engineering, art and mathematics (STEAM)."

Project Based Learning: All 21st CCLC ELT programs must provide core academic activities to actively participating 21st CCLC students using a project-based model. As per the Florida Department of Education: "research shows that students most readily engage with academic subjects—and remember what they learn for a longer period of time—when participating in problem- or project-based learning. These

activities are designed to answer a question or solve a problem, and generally reflect the types of learning and work people do in the everyday world outside the classroom. A well-designed project provokes students to encounter (and struggle with) the central concepts and principles of a discipline. Project-based learning teaches students 21st century skills as well as content. These skills include communication and presentation, organization and time management, research and inquiry, self-assessment and reflection, and group participation and leadership."

SUPPLEMENT, NOT SUPPLANT

The 21st CCLC "supplement, not supplant" provision, one of the most stringent in federal law, remains applicable to the use of 21st CCLC funds to support ELT under ESEA flexibility. Thus, a state receiving a waiver to permit an eligible entity to use 21st CCLC program funds to provide activities that support ELT programs must ensure that the 21st CCLC funds are used to supplement, and not supplant, Federal, State, local, or any other non-Federal funds that, in the absence of the 21st CCLC funds, would be made available for programs and activities authorized under the 21st CCLC program (Sections 4203(a)(9) and 4204(b)(2)(G) of the ESEA).

According to the United States Department of Education, a sub-grantee may use 21st CCLC funds to conduct activities during the school day in a school that previously expanded its school day, week, or year. However, the sub-grantee would need to demonstrate that the activities are allowable under the 21st CCLC program and do not violate the prohibition against supplanting other Federal, State, local, or non-Federal funds. For example, a school that expanded its school day previously could use 21st CCLC funds to provide additional services or activities (i.e., services or activities that it would not provide in the absence of 21st CCLC funds) to support Extended Learning Time during the school day.

In addition, if a school previously expanded its school day under a School Improvement Grant (SIG) and the SIG funds are no longer available, the school could then use 21st CCLC funds to pay for allowable 21st CCLC activities to support ELT during the school day, as long as the school can demonstrate that 21st CCLC funds are not supplanting other Federal, State, local, or non-Federal funds. By showing that the SIG funds would no longer be available, the school could rebut the presumption of supplanting, even though the SIG funds were used for the activities in prior years.

PRIVATE SCHOOLS AND 21ST CCLC ELT

Sub-grantees remain obligated to comply with Section 9501 of the ESEA (20 U.S.C. 7881) when implementing 21st CCLC activities that support ELT during the school day. Under Section 9501, each 21st CCLC sub-grantee must provide equitable services to private school students and their families. A sub-grantee generally meets this requirement by offering private school students in the area served by the sub-grant comparable opportunities to participate in the 21st CCLC program. However, it may be difficult to include eligible private school students in those activities that occur during the school day under the 21st CCLC program. Meeting the equitable services requirement in this instance may require the sub-grantee to provide the opportunity for private school students to participate in the 21st CCLC activities implemented to support ELT at the public school, or to offer comparable 21st CCLC activities during the school day in private schools.

As with any 21st CCLC activities provided under Title IV funding, a sub-grantee must consult with private school officials during the design and development of the 21st CCLC program on issues such as how the private school students' needs will be identified and the services that will be offered through the 21st CCLC program. This consultation must take place before the sub-grantee makes any decision that affects the opportunities of eligible private school students, teachers, and other educational personnel to participate in the program. Services and benefits provided to private school students must be secular, neutral, and non-ideological.

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Enhancing Quality Through Formative Evaluation

The Evaluation Process

Given the impacts of high-quality educational programs, numerous initiatives across the U.S. have increasingly established and expanded "extended learning time" (:ELT) programs. However, as such educational enrichment programs move toward greater recognition and become a more institutionalized social function, they are continuously challenged to demonstrate quality by reaching more children, strengthening programs and staff, and providing adequate facilities and equipment. Indeed, program quality has already become a public concern (Halpern, 1999) and, since the early 1990s, researchers have become more interested in identifying characteristics of quality and effective educational programs for children. In fact, poor quality educational programs have been reported to put children's development at risk for poorer language acquisition, lower cognitive scores, and lower ratings of social and emotional adjustment (Scarr & Eisenberg, 1993). Although hours of program operation, program stability, and type of activities can impact children's achievement, research has established the greatest influence to be program quality (Caspary et al., 2002).

Evaluation of program quality is integral to maintaining high-quality programs and assessing progress towards achieving the primary program objectives. Program evaluation provides information for curriculum and activity adjustment, reallocation of funding, staff development, decision-making, and accountability (McGee, 1989). However, it is critically important to carefully establish evaluation procedures to effectively and accurately monitor the quality of educational programs. Towards this end, it is impossible to determine the effectiveness of an educational program without an in-depth assessment of all aspects of an individual program. Methods of assessment tend to be qualitative in nature to ensure that program goals are being met, although quantitative data can often allow for more concrete conclusions about program effectiveness. Thus, a mixed method approach is typically the most advantageous (Halpern, 2002; Magnusson & Day, 1993; Miller, 2001; Owens & Vallercamp, 2003; Piha & Miller, 2003).

Although assessing specific activities or services is often the basis for establishing program quality, it is also important to collect data from participants, parents, and program staff. For instance, recognizing that feedback from the participants is essential to assess program quality and to encourage continued participation, a number of assessments are available to measure participant perceptions and satisfaction with educational enrichment programs. Numerous researchers (e.g., Byrd et al., 2007; Deslandes & Potvin, 1999; Grolnick et al., 2000) have also indicated that parental involvement in the education of their children is an important aspect of effective education programs from the elementary through high school years. Indeed, children often make better transitions in educational programs and have a more positive orientation if their parents are more involved in their learning. As such, it is important for an evaluation to include assessment of parent participation in and parent perceptions about the specific programs and activities. Finally, the opinions of program staff are fundamental for recognizing the importance and future directions of educational programs. Program staff members are the first-line deliverers of the program and are best able to provide immediate feedback about program operation.

Byrd, et al. (2007) and Smith et al. (2002) have suggested that evaluating the effectiveness of structured educational enhancement programs necessitates the assessment of a number of variables in addition to the opinions of program participants, parents, and facilitators. These variables include: (a) characteristics of program sites; (b) program operations and finance; (c) characteristics of participants and staff members; (d) program curriculum; (e) program attendance; (f) academic achievement in test performance, school attendance, and school behaviors; and (g) prevention of delinquent behaviors and fostering of good citizenship. Other researchers have suggested that fundamental evaluations of implementing quality programs should generally include the following 10 areas: (a) community needs assessment, (b) clarification of goals and intended outcomes, (c) program structure, (d) curriculum content, (e) program environment, (f) program facilities and infrastructure, (g) staff competency, (h) community partnership, (i) parent involvement, and (j) linkage to regular day school (Byrd et al., 2007; Friedman, 2003; Halpern, 2002; Magnusson & Day, 1993; Miller, 2001; Owens & Vallercamp, 2003; Piha & Miller, 2003). Finally, Baker and Witt (1996) and Byrd et al. (2007) suggested reporting community characteristics and assessing the effect of educational achievement programs on the enhancement of participants' self-esteem levels. Clearly, there exists a plethora of variables from which an individualized, effective and accurate evaluation of program quality can be generated.

THE SUMMATIVE EVALUATION

For the purposes of the summative evaluation, all possible variables were assessed as reported, based on the data and deliverables provided by the school District of Palm Beach County (SDPBC) 21st CCLC directors. Using all available data, the primary foci of this evaluation are to (1) a review of operational accomplishments and challenges (e.g., hiring staff, teacher recruitment/retention, etc.), (2) proposed versus actual operation (e.g., courses, attendance), (3) status of progress towards proposed objective, (4) demonstration of progress and progress towards recommendations, and (5) recommendations for future training programs. To enhance the quality and effectiveness of the 21st CCLC ELT program, it is necessary to establish a mechanism that links the program evaluation process with program improvement actions. As such, using a developmental model of evaluation, the Center for Assessment, Strategic Planning, Evaluation, and Research (CASPER) has worked directly with the program in identifying and implementing the recommendations provided throughout this report.

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Establishing a High Quality 21st CCLC ELT Program

STEM Investigation Lab - 21st CCLC ELT Program

The School District of Palm Beach County (SDPBC) proposed to implement the 21st Century Community Learning Centers (21st CCLC) Extended Learning Time (ELT) grant at four Title I elementary schools with mandatory extended school days: Dr. Mary McLeod Bethune, Belle Glade, Pioneer Park, and West Riviera Elementary Schools. These schools are largely populated with economically disadvantaged students from traditionally-defined "minority" groups who come from impoverished homes, where living conditions, nutrition, and health are greatly compromised. Many of these families are first generation immigrants and, consequently, language is often a barrier to understanding and supporting the educational needs of their children. To meet the identified needs and critical risk factors for these students and families, the project proposed to supplement the school day by providing an additional teacher at each school to provide a safe, stable, enriching STEM-focused learning environment. The 21st CCLC STEM Investigation Lab (iLab) proposed to provide all students in the identified schools with at least 1,080 minutes per year of academic-focused, standards-based, research-supported STEM programming to both address the reading and literacy needs of these students, while also helping the school meet the State's Annual Measurable Objectives (AMOs). The 21st CCLC iLabs proposed to focus on the Engineering is Elementary (EiE) curriculum to provide hands-on, inquiry-based projects that teach and reinforce reading, writing, mathematics, and science standards through engineering and science experiments. Program activities, infused with ELL strategies, are designed to directly complement and enrich school day learning. All students attending the four schools were proposed to participate in the program, with the actual number varying depending on school enrollment. The 21st CCLC project goals, objectives, and activities for all participating students are designed to: (1) improve academic performance (mathematics, reading, and science); (2) increase social competence and teamwork; and (3) increase parent involvement and family literacy (specific objectives are providing in the narrative). The SDPBC Elementary Science Education Department has worked with the Project Director and teachers to ensure project effectiveness.

21ST CCLC INVESTIGATION LAB SPECIFIC NEEDS

Introduction: The School District of Palm Beach County (SDPBC) serves a K-12 student population of 177,815. Over half (58.5%) of these students are economically disadvantaged and eligible for free/reduced lunch. The SDPBC is a majority-minority District, with 33% of students identified as "White," 29% African American or "Black," 31% Hispanic or Latina(o), and 7% from another ethnicity. Keeping with South Florida's demographics, immigration into Palm Beach County has resulted in over 150 languages spoken in students' homes, representing 197 different countries. English is the second language for over 18,500 students (SDPBC, 2011).

Schools and Communities with Greatest Needs: The Children's Services Council (CSC) analyzed PBC neighborhoods by zip code to identify risk indicators (CSC, 2010). All four schools are located within the most challenged PBC neighborhoods, with circumstances that jeopardize the health, safety, and education of children. They have more households are headed by single parents, higher rates of unemployment, higher crime, lower graduation rates, and more children scoring high risk on school readiness assessments. Poverty can negatively impact school success, achievement, and social-emotional functioning. It can impede a child's cognitive development and ability to learn, and can contribute to behavioral, social, and emotional problems. Children from poor families may have limited exposure to print materials, and activities that stimulate early development of reading/language skills. They are at greater risk of absenteeism and for repeating a grade, primary risk factors for dropping out of school. The four targeted elementary schools are populated with minority children from impoverished homes, where living conditions, nutrition, and health are greatly compromised. The following table demonstrates high demographic risk indicators compared to District elementary schools:

Table 1: Demographic Risk Indicators among Targeted Schools

School Name	# Students	% F/R Lch	% White	% *Black*	% Hisp.	% ELL	% SWD
Bethune ES	508	96%	1%	96%	2%	2%	16%
Belle Glade	583	96%	1%	60%	38%	36%	14%
Pioneer Park	409	99%	2%	72%	27%	25%	19%
West Riviera	536	99%	1%	85%	9%	9%	15%
All Elem Schools	*80,262*	*61%*	33 %	29 %	31 %	17 %	15 %

Source: Research & Evaluation Gold Report 11/14/2012 from www. palmbeachschools.org

Support AMO requirements of the ESEA Flexibility Waiver: The four target schools were ranked among the State's lowest performing elementary schools, and thus are mandated to provide an additional hour of intensive reading instruction each day. Through the ESEA Flexibility Waiver, this project seeks to provide high quality academic enrichment during the expanded school day that will promote higher order, critical thinking skills that will result in improved student learning and achievement on state assessments. The table on the following page provides more specific information about the current AMO status, school-wide needs, and goals for the schools identified within this 21st CCLC STEM iLab Project.

Table 2: Target Schools 2012 FCAT and 2013 Annual Measurable Objectives

Target Schools	READING % Satisfactory		MATHEMATICS % Satisfactory	
	2012 FCAT	2013 AMO	2012 FCAT	2013 AMO
Bethune ES	69%	38%	41%	43%
Belle Glade ES	25%	39%	24%	36%
Pioneer Park ES	19%	37%	22%	33%
West Riviera ES	18%	34%	26%	38%

Common Core and State Standards: The project proposed to serve all K-5 students in each school on a rotational schedule throughout the year with age-appropriate, authentic learning experiences aligned with standards. State NGSS and Common Core initiatives require students to dive deeper into and learn more about important concepts instead of learning bits and pieces about lots of concepts. Students will need to demonstrate real skills and knowledge, not just an ability to pass a test. The new standards require students to think critically, to work cooperatively, and to problem solve creatively—skills critical for workplace success and for the jobs of tomorrow.

Academic Benefits and Student Achievement: The 21st CCLC STEM iLab will be a place where students, many of whom are performing below grade-level, will become engaged, motivated, and excited about learning as they practice applying their knowledge and demonstrating their understanding of concepts through open-ended exploration, collaboration, problem-solving, decision-making, and innovation. STEM and problem-based learning will provide a meaningful context for learning math and science will lead to increased comprehension. Students will practice common core literacy and science skills such as inquiry, prediction, critical thinking, observation, data analysis, and reflection. The hands-on projects will enrich academic learning,

and reinforce standards through the integration of reading, writing, and mathematics with scientific inquiry and the engineering design process.

Needs of Adult Family Members: Many of the parents are single parents, with low income and low education attainment. Some are first generation immigrants, who speak Spanish or Haitian Creole. Although parents desire quality education for their children, many face daunting barriers to school involvement. Through surveys and internal canvassing at target schools, the schools have conducted needs assessment to identify barriers to parent involvement and determine solutions. Some examples include: *lack of childcare* – schools provide childcare during parent events this year; *language barriers* – translators present and written communications translated, as needed; *hard to reach parents* – use multiple methods of communication; and more. Each school's analysis of barriers and strategies to overcome them are outlined in the school improvement plans, completed October 2012.

EXPERIENCE IN EDUCATIONAL PROGRAMMING

The School District of Palm Beach County (SDPBC) is fiscal agent for the 21st CCLC STEM iLab Project. SDPBC has experience and capacity to manage this grant project efficiently and effectively, with clearly delineated authority and with experienced, professional staff who are full-time district employees in positions that require continuity and follow-through. SDPBC was one of four urban school districts in the nation selected as a finalist by The Eli and Edythe Broad Foundation for the 2012 Broad Prize for Urban Education, in recognition of a clear record of success improving student achievement, decreasing achievement gaps, and increasing graduation rates across subgroups of students. SDPBC also has extensive experience implementing 21st CCLC programs in schools and currently operates five 21st CCLC Afterschool Grants operating at 25 school locations. For this, and many other federal and state grant projects, the SDPBC has demonstrated good stewardship of grant funds, appropriate management, meaningful partnerships, and successful student outcomes. The SDPBC effectively manages an annual budget of over $2 billion dollars, of which grant funds average $500 million. Upon approval, SDPBC will move quickly for an immediate project launch.

On behalf of the principals in the four eligible schools, the Superintendent has committed that all aspects of this 21st CCLC STEM iLab Project will be implemented with fidelity and school leadership, in compliance with ESEA Flexibility Waiver requirements. The Superintendent has designated the Elementary

Science Curriculum Coordinator to act as the Project Director (district-funded position) and work closely with the principals to provide project leadership. The Project Director has the scholarship, expertise, capacity, and vision necessary to ensure high-quality implementation, sustainability, and replication of the project's successes. The Project Director will work with each of the principals to define, monitor and communicate the project's purpose as supplemental academic enrichment learning; to identify and hire certified teachers as the STEM iLab teacher in each school; to order instructional materials and provide technical assistance to the iLab teachers with the Engineering is Elementary (EiE) project-based learning curriculum; to facilitate collaborative curriculum planning and group professional development for iLab Teachers; to work closely with the evaluator and Teachers to establish procedures for data, monthly reporting, and formal evaluation reports; and to efficiently manage grant funds as per the program requirements and federal, state, and district regulations.

PROACTIVE PLANNING: STEM INVESTIGATION LAB

The focus of the School District Palm Beach County during the initial months after learning of the tentative award of the new STEM Investigation Lab 21st CCLC program was to plan the successful implementation of a high-quality program prior to enrolling students at the beginning of the 2013-2014 academic year. This implementation planning process helped ensure that students, when enrolled, would be afforded the most complete and comprehensive program possible without enduring significant changes that could detract from receiving the full breadth of services and/or lead to premature termination of students secondary to frustration and confusion. Ultimately, the 21st CCLC ELT program was implemented relatively efficiently and effectively, with services starting the first day of school, as expected by the Florida Department of Education.

As quality of state-funded educational programming becomes a public concern, it is imperative that program quality be more than just monitored and measured. Rather, it must be actively managed with a view towards continuous improvement and development. Within such active management, it is important to account for the impact of both program structure and delivery processes on the quality of the program. For instance, effective programs must match the developmental needs of their participants, and they must also fit the demands and resources of the particular settings in which they are implemented. A key to successful implementation of high-

quality programming is to be proactive when planning and structuring the program to overcome or account for predetermined areas that may be problematic. Indeed, it is critical to take corrective actions during the design of the program, rather than waiting until corrective actions could have detrimental impacts. For such proactive planning to be successful, the School District of Palm Beach County 21st CCLC Investigation Lab required a program-wide commitment to continuous quality improvement and continuous process improvement. Teachers and administrators worked to develop a culture of critical inquiry and ensured that quality processes and outcomes are central to the vision, goals, and priorities of all staff and within all program activities.

In cooperation with such a proactive planning process, Elias et al. (2003) proposed the following list of factors associated with the successful implementation of an enduring program: (a) presence of a program coordinator or committee to oversee implementation and resolution of day-to-day problems, (b) involvement of individuals with highly shared morale, good communication, and a sense of ownership, (c) employment of qualified personnel, (d) ongoing processes of formal and informal training, including the involvement of knowledgeable experts, (e) high inclusiveness of all school stakeholders, (f) high visibility in the school and the community, (g) program components that explicitly foster mutual respect and support among students, (h) varied and engaging instructional approaches, (i) linkage to stated goals of schools or districts, (j) consistent support from school principals, and (k) balance of support from both new and seasoned administrators.

Each element of the proactive planning process rests upon high-quality leadership, effective staffing, and program visibility. The importance of a physical presence in the community cannot be understated for the purposes of proactive planning and to help establish a stronger, more dedicated staff. Over the course of the initial weeks and months of operation, the School District of Palm Beach County leveraged and enhanced their strong community presence, while also focusing on hiring necessary certified teachers to implement the highest quality program for student participants.

Program Leadership and Staffing

Regardless of the adequacy and depth of the proactive planning process, and regardless of the quantity of operations and services (discussed later in this report), implementing and maintaining high-quality out-of-school programming depends heavily upon consistently effective program management. Ultimately, program management is a process of planning, organizing, leading, and controlling program

resources and the work of program staff members to achieve stated program objectives. In turn, achievement of program objectives depends upon the extent to which program activities are formulated, organized, and coordinated in terms of human, financial, and material resources. Within this process, leadership plays a vital role in establishing a new culture, developing new directions, mobilizing change, creating opportunities, and motivating staff members. The School District of Palm Beach County has provided dedicated district-level resource teachers to oversee the 21st CCLC iLab Program – overseeing both the direct student services and the operational aspects of the 21st CCLC ELT program. Such oversight and assistance is complimented by outstanding support from district science administrators, area superintendents, and assistant superintendents. Certainly, the extraordinary in-kind support provided by the school district helps ensure the 21st CCLC iLab program will provide the highest quality services and progress towards the proposed objectives.

In addition to program leaders, a high-quality program relies heavily upon well-qualified and experienced core program staff and service providers. The School District of Palm Beach County 21st CCLC iLab program successfully attracted experienced staff members to provide core academic, project-based enrichment to actively participating 21st CCLC students. As required by the Florida Department of Education, all academic-based 21st CCLC projects and programming are provided by teachers certified by the FDOE. Regardless of the activity provided, all 21st CCLC teachers are qualified to provide the specific activities to elementary school students, based on information provided by the program for the formative evaluation.

Table 3: Staff's Regular Responsibilities

All Sites	**2013 Summer**		**2013-2014 Academic Year**	
	Paid	*Volunteer*	*Paid*	*Volunteer*
School-day teachers (incl. former & sub.)	--	--	6	--
Center administrators and coordinators	--	--	2	--
Youth dev. workers / staff w/ college degree	--	--	--	--
Total Staff	--	--	8	--
Total Staff Paid by Other Funds	--	--	2	--
Total Staff Replaced within 21st CCLC	--	--	2	--

** These categories represent the regular responsibilities of program staff during the regular school day. These categories were designated by the US Department of Education for all 21st CCLC programs. Data are reported to the US Department of Education by Site, rather than by Grantee. Within the School District of Palm Beach County, each site is staffed by a single, full-time teacher – the District provides support in the form of two science coordinators that oversee the 21st CCLC ELT Program.*

QUICK FACTS
21st CCLC Staffing

8 Staff Members
6 Certified Teachers (100%)
2 Paid By Other Funds (33.3%)

Staff Turnover:
0 Staff Replaced during 2013-2014

STAFF DEVELOPMENT AND TRAINING

Effective leadership requires a great deal of wisdom, skill, and persistence to design and implement a quality educational program; and the leadership process is vital to ensure that stakeholders (e.g., program staff, students, teachers, parents, and community partners) are equipped with the skills they need to help achieve and support program objectives. Indeed, effective leadership will engage students, parents, teachers, counselors, and administrators, while also providing them with the necessary support to help bridge achievement gaps through program activities. Towards this end, conducting quality assessments, offering professional training, and providing technical assistance are necessary elements for an optimal education program and can have measurable effects on students' academic performance and social behaviors. It is important to note that each principal underscored the importance for the 21st CCLC iLab Teacher to be fully integrated as a member of the school teaching staff, and the iLab teacher has full access to student records and individualized learning plans.

To support student services through the 21st CCLC program, the School District of Palm Beach County iLab 21st CCLC Program Directors and leadership provided staff development for those teachers hired to provide 21st CCLC services. Because engineering is new for both teachers and students, and to learn more about the content and pedagogy, the iLab teachers were provided with immersion trainings in June, July, and August – prior to the start of the academic year. In addition to these trainings, one full day of professional development was provided nearly every month (except December and February) to create a peer-support network for 21st CCLC

iLab teachers to create and learn lessons, technology, concepts and skills needed to facilitate the 21st CCLC instruction. Sessions varied in content, with most reviewing the structure and philosophy shaping the EiE curriculum from engaging the learner to managing the hands-on activities to fostering reflection about appropriate and effective instructional strategies. Some of the teachers also attended professional development workshops at Museum of Science, Boston or South Florida Science Museum – bringing back to the group their findings and information. Indeed, the program has provided several trainings (e.g., EiE curriculum training provided by the Boston Museum of Science), professional development (e.g., meetings between teachers and program administrators), general networking opportunities between teachers from both iLab grants, and attendance at professional conferences specific to the 21st CCLC activities provided under the 21st CCLC ELT grant. In addition to such trainings, program administrators have been provided more informal in-vivo trainings, including walkthroughs, demonstrations, and guided implementation of 21st CCLC projects. A list of professional trainings dates was provided by the program administrators and the evaluator has been present for several trainings and meetings, such that it is apparent sufficient trainings are being provided to the 21st CCLC teachers. The program is encouraged to ensure all trainings and meetings are adequately documented, with agenda, sign-in sheets, and information on resources provided. The following are the documented trainings provided (all district trainings were provided for the full day – e.g., 8:00am – 3:30pm):

- June 12-13, 2013 (Engineering is Elementary PD Workshop)
- July 15-18, 2013 (Lesson Planning and 21st CCLC Implementation)
- August 5-8, 2013 (Lego We Do Robotics)
- September 26, 2013
- October 24, 2013
- November 30, 2013
- January 30, 2014
- March 6, 2014
- April 2-6, 2014 – NTSA National Conference (Boston)
- April 3, 2014
- May 8, 2014

Note: Both 21st CCLC iLab projects (Investigation and Inquiry) met together for the professional development and training meetings, as it allowed more crossover discussions about experiences and a greater resource for teachers to overcome any

challenges with implementing the programming. A very strong professional network has been created across the iLab teachers and District STEM coordinators working on these projects. Certainly, the evaluator has seen several instances where the communication and support from the iLab network has helped strengthen program implementation and increase the self-efficacy and self-confidence of iLab teachers.

PROGRAM PARTNERSHIPS AND SUSTAINABILITY

One of the goals of the 21st CCLC program is to continue activities beneficial to students and their families after the three-year project period. By federal law, all 21st CCLC programs are required to demonstrate how the program will become self-sustaining both within and beyond the initial funding. Florida 21st CCLC programs are not permitted to charge any fees to students or parents in association with 21st CCLC programming without authorization from the Florida Department of Education (FDOE) and no program has ever received such authorization.

Although 21st CCLC objectives do not specifically address the importance of developing, maintaining, and enhancing partnerships and sustainability, it would be remiss for this evaluation to ignore the substantial progress of the School District of Palm Beach County in such efforts. Indeed, the program engaged and received support from a number of partners that have and will continue to assist with developing, implementing, evaluating, and sustaining the 21st CCLC program. For instance, the Boys and Girls Club of Palm Beach County (BGCPBC) and Prime Time of Palm Beach County both formally partnered with the SDPBC in writing and submitting the original iLab application. The BGCBPC currently operates 21st CCLC before school and afterschool programming for some of the students attending the targeted 21st CCLC iLab schools, and has worked directly with SDPBC to ensure the afterschool programming is consistent with that provided during the 21st CCLC iLab Project. Prime Time developed informal science training materials through a grant from the Noyce Foundation and provides professional development to 21st CCLC providers throughout South Florida. Prime Time will assist with the professional development of 21st CCLC iLab Teachers, particularly in the second year of program operation. The Museum of Science, Boston has worked with the SDPBC Elementary Science Curriculum Department in a train-the-trainer approach to understand the engineering/technological content and pedagogy of Engineering is Elementary (EiE) curriculum resources. The Project Director was trained as a trainer and facilitates professional development workshops for the iLab Teachers and other science teachers

in each participating school, introducing them to EiE concepts/skills, reviewing the program structure/philosophy, engaging teachers in curricular activities, and fostering reflection regarding appropriate instructional strategies. The South Florida Science Museum and the SDPBC have a longstanding partnership, collaborating extensively on a variety of programs/initiatives to enhance science education and raise student achievement in science. These initiatives include: A2Science (Anytime, Anywhere Science), an educational video program targeting challenging benchmarks; Science Passport, an outreach program where museum staff visit schools to conduct hands-on science lessons in the classroom; ARISS Mission Control, an opportunity for students to speak with an astronaut aboard the International Space Station as it orbits over Florida. The Museum reaches over 40,000 students annually through in-house and outreach programs throughout SDPBC, and provides over 30 science educational programs for students aligned with state standards. Partners were also to be part of a Partner Advisory Committee; invited to special events (e.g., family nights/family events); acknowledged in press releases/documents; and recognized at the District's Business Partnership Breakfast. As of the summative evaluation, the partnership advisory committee had not yet been established. Table 4 provides information on current partnerships, as of December 31, 2013.

Table 4: Summary of Partners and Contractors

Agency Name	*Type of Organization	Subcontract (Yes/No)	Estimated Value ($) of Contributions	Estimated Value ($) of Subcontract	Type of Service Provided
School District of Palm Beach County	SD	No	$40,000	--	Facilities
School District of Palm Beach County	SD	No	$60,000	--	Staffing
Prime Time Palm Beach County, Inc.	CBO	No	$5,000	--	Training
Boys and Girls Clubs of Palm Beach County	BGC	No	$5,000	--	Activities
Museum of Science, Boston	MUS	Yes	$2,000	--	Training
South Florida Science Museum	MUS	Yes	$1,000	--	Activities
TOTAL			**$113,000**	**--**	

**School District (SD), Community-Based or other Non-Profit Organization (CBO), Nationally Affiliated Nonprofit - Boys & Girls Club (BGC), Nationally Affiliated Nonprofit - YMCA/YWCA (YMCA), Nationally Affiliated Nonprofit - Other Agency (NPOO), Faith-Based Organization (FBO), Charter School (CS), Private School (PS), College or University (CU), Regional/Intermediate Education Agency (IEA), Health-Based Organization (hospital/clinic/etc.) (HBO), Library (LIB), Museum (MUS), Park/Recreation District (PRD), Other Unit of City or County Government (CNT), For-Profit Entity (FPO), Bureau of Indian Affairs School (IAS), Other (OTH)*

It is anticipated that the program will develop new partnerships and/or further enhance the current partnerships during the second operational year. It is noted that the SDPBC has standardized methods of documenting partnerships, both in terms of services rendered and monetary valuation of services. Documentation includes participation records, workshop agendas, development schedules, "thank you" letters, and public announcements. The program is encouraged to ensure all necessary data on program partnerships are collected, as presented in the following table (e.g., estimated valuation), such that information can be submitted to the Profile and Performance Information Collection System (PPICS).

21ST CCLC ADVISORY BOARD

One of the most impactful methods of engaging partners and other stakeholders is through membership on the 21st CCLC Advisory Board. The Advisory Board utilized by the School District of Palm Beach County for the 21st CCLC Investigation Lab project is currently comprised of the School Advisory Council implemented by the principal at each school. This is an important advisory board and will certainly help ensure the iLab activities match the mission and vision of the school. However, the role of a 21st CCLC advisory board is to provide important feedback and advice to the 21st CCLC program in matters regarding programmatic refinements and improvements, such that it is important that the advisory board consist of a variety of stakeholders and that these stakeholders be specifically related to the overall 21st CCLC project. The SDPBC specifically noted the intention to develop a partnership advisory board, such that the program is encouraged to ensure this advisory board is developed at the beginning of the second operational year. Given the partners involved with the project, the advisory board should involve the school principals, BGC of Palm Beach County, Prime Time Palm Beach County, and the South Florida Science Museum. There is no need for the representatives to meet in person, if that is precluded due to schedules and availability, as effective partnership advisory board meetings can be held via conference call and/or through an online 'chat' system already available to the District (e.g., Edmodo). The partners should be educated on the grant application and specific requirements that cannot be altered prior to requesting input about programmatic or operational changes.

INFORMATION DISSEMINATION AND PROGRAM MARKETING

A proactive implementation plan, including hiring quality staff and establishing a visible community presence, is further enhanced by strong information dissemination

and marketing. In this regard, the School District of Palm Beach County 21st CCLC iLab Project also focused early efforts on disseminating information throughout the communities and schools housing potential 21st CCLC student participants. The process of disseminating information to the community and schools involved the development of numerous partnerships, meeting with community leaders and school principals, and creating 21st CCLC announcements for dissemination. Effective community outreach strategies were used to broadly disseminate program information, data-based progress, and achievements to all appropriate audiences and to expand the network of potential partners. The methods included periodic meetings, briefings and updates with internal school staff and parents, project partners, and external community interest groups to ensure that the objectives and accomplishments are communicated and understood. Through this project, a teacher's curriculum guide for project-based learning will be developed and disseminated to other elementary schools in the District and beyond, with the project directors and iLab teachers making presentations at state and national conferences. Also, a project website was proposed to be developed to showcase activities, projects, best practices, links to partner sites and resources, and program contacts. Translations of all informational materials are made available in the languages spoken by parents and families. District Language Facilitators (funded by District) are available to translate for teachers when communicating with parents. While the program was not able to implement all proposed elements of the dissemination plan (e.g., the program website is not yet active), the SDPBC has dedicated grant funding in the second year to hire a full-time coordinator (across the two iLab projects) to help ensure all proposed dissemination efforts are completed (in addition to the plethora of other tasks necessary to operate effective and efficient grant programs).

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21ST CCLC PROGRAM OPERATIONS

REQUIRED PROGRAM OPERATIONS

As per the United States Department of Education, the 21st CCLC ELT sub-grants could be used to carry out a broad array of activities that align to schools' instructional priorities and advance student academic achievement. Examples include: (1) time for additional core academic instruction including English, math, science, and social studies; (2) individualized academic intervention or acceleration based on an ongoing analysis of student achievement data (e.g., remedial education activities and academic enrichment learning programs); (3) programming that provides limited English proficient student supports to emphasize language skills; (4) engaging enrichment programming such as art and music education activities, technology education, health and wellness programming and programming that supports the development of a strong school culture of high expectations and academic achievement; (5) programs that promote community and parental involvement; and (6) programming that allows teachers and partnering staff to meet regularly for professional learning focused on improving instruction and data analysis to improve academic achievement and student engagement.

In addition to federal requirements, the Florida Department of Education required all applicants for the 21st CCLC ELT sub-grants to provide activities that helped support Florida's Annual Measurable Objectives (AMOs). Under the ESEA flexibility waiver, which allows the use of 21st CCLC funds to support extended learning time, Florida's AMOs are: (1) School Grade: Provides a comprehensive overview of the performance of the school, including subgroup proficiency and student learning gains; (2) Increase Student Performance in Reading and Mathematics: Focuses schools on increasing the proportion of students scoring at levels 3 and above and reducing the proportion of students scoring at levels 1 and 2 by 50% over six years; (3) Adequate Progress of Students in the Lowest-Performing 25% in Reading and Mathematics: Includes overrepresentation of specific subgroups that are low-performing and focuses schools on raising their achievement and reducing achievement gaps; and (4) Comparison of Florida's Student Performance to the Highest Performing States and Nations: Compares NAEP outcomes for reading and mathematics in grades 4 and 8 to the scores from the top five states.

As per the Florida Department of Education: "21st CCLC activities may be carried out at any point in time during an expanded school day, week, or year. For example, if an LEA lengthens its school day beyond the state minimum, the LEA or another eligible entity might use 21st CCLC funds to provide supplemental science, reading, art instruction, or other supplemental academic enrichment activities to students in the morning or afternoon to allow teachers time to collaborate or plan. Similarly, if a district mandates an expanded school week, then the LEA might work with a community partner to use 21st CCLC funds to incorporate enrichment activities, such as debate or college preparation, on either a Saturday or a weekday. Using 21st CCLC funds to support expanded learning time should not be just "more of the same;" it should involve careful planning by the eligible entity to ensure that the programs or activities will be used to improve student achievement and ensure a well-rounded education that prepares students for college and careers. Core academic subjects must be integrated using problem- or project-based learning that is creative, hands-on, fun, and designed to foster a love of reading, science, technology, engineering, art and mathematics (STEAM)."

SUMMER OPERATIONS

The United States Department of Education allows all 21st CCLC programs to operate during the summer months, thus reducing the "summer slide" and allowing students to participate in year-round services. However, the purpose of the 21st CCLC ELT program, as proposed by the School District of Palm Beach County (Investigation Lab), is primarily focused on supplementing the regular school day to help support the extended learning time model. As such, the program did not propose to operate during the summer months or during afterschool hours. As there were no student services during the summer, the 21st CCLC program also did not incur unnecessary expenditures during the summer months. However, some necessary and reasonable expenses included pre-purchasing materials and curriculum to allow for immediate start at the start of the school year, as well as staff salaries for time worked to receive training, develop programming and lesson plans, and setting up the operational aspects of the program. This training and preparation time was approved by the Florida Department of Education within the proposed budget.

ACADEMIC YEAR OPERATIONS

The 21st CCLC ELT Investigation Lab (iLab) under the School District of Palm Beach County concluded the first year of operations during the 2013-2014 academic

year, having received an official award letter from the Florida Department of Education (FDOE) late in the previous academic year and being provided an allowance to begin operations at the beginning of the 2013-2014 academic year. As such, the School District of Palm Beach County (iLab) began providing 21st CCLC academic-year services on the first day of the school year (August 19, 2013), well within the required starting date established by the FDOE (i.e., within 2 weeks of the beginning of the school year). As proposed, the program ended academic year operation on the final day of school, for an estimated total of 160 days of academic year operation (though some sites operated more or less, depending on special circumstances). Operational statistics are provided in Table 5.

Table 5: 2013-2014 Academic Year Operation (Through June 30, 2014)

			Typical number of hours/week site was open				TOTAL number of days site operated			
Investigation Lab	Total number of **weeks** site was open	Typical number of **days per week** site was open	*Before School*	*During School*	*After School*	*Weekend/Holiday*	*Before School*	*During School*	*After School*	*Weekend/Holiday*
Belle Glade Elementary	36	5	--	40	--	--	--	171	--	--
Bethune Elementary	35	5	--	40	--	--	--	160	--	--
Pioneer Park Elementary	35	5	--	40	--	--	--	166	--	--
West Riviera Elementary	36	5	--	40	--	--	--	173	--	--

**The 21st CCLC statute specifically indicates that services are to be provided outside the regular school day or during periods when school is not in session (e.g., before school, after school, evenings, weekends, holidays, or summer). However, under the ESEA Waiver, Florida was permitted to award grants for programs to operate during the school day to support Extended Learning Time (ELT) at selected schools. This 21st CCLC program only provides during school programing, and does not operate during out-of-school time.*

It is important to note that the program did not propose to operate every school day, nor did the program indicate within the approved narrative how many days would be provided across the school year. However, it is the intention that the 21st CCLC program is provided as many days as possible, excluding student testing days, iLab teacher absences, and approximately 10 professional development days for the iLab teachers (as proposed). Ultimately, given that this is a during-school 21st CCLC program and given that the teachers provided services at least 160 operational days at all sites (see Table 5), the School District of Palm Beach County operated the 21st CCLC ELT program as proposed in the grant application (as per days of operation). All programming is open to any eligible 21st CCLC student attending the four identified schools, though some students are not provided 21st CCLC services due to 'pull outs' and remediation services beyond the control of the 21st CCLC program. As mentioned previously, this 21st CCLC program was specifically developed to

improve academic achievement, motivation and dedication to education, and personal growth and development.

SUPPLEMENTAL SNACK AND MEAL REQUIREMENT

All 21st CCLC programs in the State of Florida are required to provide food to all actively participating 21st CCLC students during program operational hours. More specifically, each 21st CCLC program must provide supplemental meals when the program is open as follows: (1) daily, nutritious snack when operating only during after-school hours; (2) daily, nutritious breakfast and snack when operating during both before-school and after-school hours; and (3) daily, nutritious breakfast, lunch, and snack when operating on non-school days (dependent on hours of operation). However, Florida rules disallow the use of state funding to purchase meals and/or food items, such that funding for snacks/meals cannot be drawn from 21st CCLC funds and must come from other sources (e.g., grocery store donations, private donations, private foundations or endowments, etc.). Finally, as 21st CCLC programs serve primarily low-income students, programs in Florida are not permitted to charge students for any costs associated with supplemental snacks and meals. The School District of Palm Beach County ensures all eligible students targeted for 21st CCLC services (i.e., all students eligible at the four schools) are afforded a free, daily, nutritious breakfast and lunch, as required, funded through Title I funding.

SAFETY REQUIREMENTS

The safety of students participating in Florida's 21st CCLC programs, whether during school or out-of-school, is of the highest priority to the Florida Department of Education (FDOE). Within Florida, each 21st CCLC program must demonstrate that students will participate in structured activities in a safe environment, supervised by well-trained and caring staff. To this end, each program provides a safety plan that, at a minimum, describes the following: (a) how the safety of children will be maintained on-site (e.g., requiring parent sign-out, checking identification, presence of school resource officer) and during off-site activities (if applicable), (b) how personnel hired to work at the center will meet the minimum requirements set forth by the district or agency and that the personnel will have all required and current licenses and certifications where applicable, and (c) how the centers will ensure that students participating in the program will travel safely to and from the center.

On-Site Safety: Each school has substantial safety measures already in place to provide a safe learning environment for 21st CCLC students. Some of these measures

include: (1) a crisis response team trained in a variety of potential school emergencies; (2) all exterior school doors locked with key-card, buzzer/intercom, and video camera systems; (3) all school entrances monitored during school hours; and (4) principals and key administrators have cell phones to assist in emergency communications. Additional procedures for student safety include: (1) school evacuation plan, first aid kits, and defibrillator; (2) procedures for dispensing medication and first aid treatment; (3) walkie-talkies with District Police Department emergency broadcasts; and (4) outdoor safety procedures.

Off-Site Safety: Bus transportation was provided for educational field trips, where parents signed permission slips and provided emergency information. Students are never left alone during trips, and standard safety procedures include: (1) buddy system; (2) regular head count (visual and verbal); (3) training in symptoms of heat exhaustion and heat stroke, (4) drinking water available during all activities; and (5) checking public bathrooms before student use, with at least one staff in the restroom for every four students.

Background Checks / Staff Certification: Safety procedures govern access to each school and its students, and all access is limited to authorized students and visitors. Visitors sign in and wear and ID badges. Parent(s) must designate persons authorized to pick up their child. Identification checks are used for the release of students to parents, guardians, or other authorized persons. Prior to working with children or working with 21st CCLC data, all school district employees, volunteers, vendors, contractors (including the external evaluator) must be fingerprinted and undergo a Level 2 FBI background check (as per Jessica Lunsford Act, F.S. 1012.465). All teachers employed through the 21st CCLC iLab Project will be certified science educators by the Florida Department of Education, Bureau of Educator Certification.

Safe Travel To/From Site: Each school has an established an orderly process to ensure the safety of students arriving to or leaving campus, including those who walk, ride bicycles, ride in buses, or ride in private vehicles. All SDPBC schools provide separate drop-off and pick-up areas for school buses and private vehicles, as well as separation of pedestrian traffic. All persons transporting students are properly licensed, trained, and qualified. Established procedures ensure that all students on buses are safely transported to and from schools, and released only at approved locations and under approved circumstances.

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Student Attendance and Demographics

Student Recruitment and Enrollment

The ultimate purpose of designing a high-quality, research-based, and well-rounded 21st Century Community Learning Center (CCLC) program is to recruit, retain, and serve students in low-income areas that are at-risk for lower levels of academic achievement. The focus of any program, whether it is in Florida or elsewhere in the nation, falls squarely upon the students being served. Even with outstanding activities, well-planned schedules, high-quality staff, and continuous professional development, a program will only have wide-spread and significant impact if they are able to recruit and retain the participation of eligible students and their family members. It is important to note that, even though this is a during school program, the students could refuse to participate in the supplemental activities provided under the iLab ELT project (a handful of students did refuse to participate, as per evaluation interviews, but this was not tracked given the low incidence). Regardless, to better understand the population of students and families impacted by the 21st CCLC program, this section provides information about attendance, enrollment, and demographics of those students participating in the School District of Palm Beach County 21st CCLC Investigation Lab activities during the operational components described in the prior section.

21st CCLC Required Target Populations

Students: Florida's 21st CCLC programs are designed to help students meet state and local academic achievement standards in core academic subjects, particularly those who attend low-income, low-performing schools. Across the state of Florida, the 21st CCLC program targets at-risk students from kindergarten to twelfth grade. Recipients must target only those students attending schools eligible for Title I School-Wide Program services, attending schools with at least 40% low-income families (as demonstrated by free and reduced-price lunch status), or living within the district-defined service areas of such schools.

Students with Special Needs: In accordance with State and Federal laws, Florida's children with special needs must be afforded the same opportunities as children in the general population. Eligibility for funding under Florida's 21st CCLC initiative requires all programs to demonstrate the capacity to equitably serve students with special needs. In Florida, students with special needs include those who may be identified as Limited English Proficient (LEP), homeless, migrant, or with a physical, developmental, psychological, sensory, or learning disability that results in significant difficulties in areas such as communication, self-care, attention or behavior, and are in need of more structured, intense supervision. In Florida, no child may be excluded from the 21st CCLC program, regardless of the level or severity of need, provided that they can be safely accommodated. Every student in the four iLab schools were offered services and no student was excluded due to any special need, and services were coordinated with the School District and School Administration to ensure students received all accommodations and assistance (e.g., one-on-one paraprofessionals, medication services, etc.). The school and district have very clear and sophisticated policies and procedures to ensure all students receive full services.

Adults and Families: In addition to services for eligible students, federal law allows 21st CCLC funds to support services to family members of participating students. Within Florida, all 21st CCLC programs are required offer some level of services to support parent involvement, family literacy, and/or related educational development. As per federal law, the 21st CCLC program may only propose services to adult family members of students actively participating in the 21st CCLC program. In Florida, services for adult family members cannot extend beyond the dates of the ongoing program for students.

STUDENT ENROLLMENT

Any actualized impact of the 21st CCLC program requires successful implementation of the recruitment and enrollment plan, thus ensuring the highest level of student participation. The 21st CCLC STEM Investigation Lab under the School District of Palm Beach County proposed to serve the entire school population at four elementary schools, providing project-based learning activities to all students in all grades. As proposed, the program fully implemented the enrollment plan and established services with students in all grade levels at all schools.

Overall, of the 2,108 students enrolled in the four schools in the 2013-2014 academic year, the program served a total of 2,037 students – representing 96.6% of the total

school population. Table 6 provides more detailed information about the student enrollment in the 21st CCLC iLab program by school. While these figures are required by the Florida Department of Education, they should be interpreted with caution in terms of program operations and quality, as the program did not propose to serve every student every day and not all students receive the same level of services. Indeed, on average, students received 29.1 days of service, while 71 students received no service (due to absences or individualized remediation efforts) and other students received as much as 51 days of service (maximum). However, when looking only at general enrollment in the program, the School District of Palm Beach County appeared to provide services to the overall number of students proposed in the grant application. As anticipated, nearly 100% of students received at least some level of 21st CCLC services by the end of the 2013-2014 academic year.

Table 6: Overall Student Enrollment vs. School Enrollment

Site	All Students Served: Attending At Least One Day	School Enrollment (Since Year Start)	Proportion of School Served in 21st CCLC
Belle Glade ES	563	565	99.65%
Bethune ES	479	492	97.36%
Pioneer Park ES	338	338	100.00%
West Riviera ES	657	713	92.15%
Total	2037	2108	96.63%

Note: This table is required by the Florida Department of Education, as formatted within this report. Although the table only provides a limited data, these figures are helpful for the FDOE in determining enrollment of sites across the State of Florida.

Each school operated slightly differently during the first year of operations (some differences will remain in the second year, though the program has worked to help reduce the differences in operational schedules for the second year). The operational differences appeared to make logical sense for the composition of the school and none had apparent negative impact the quality of programming provided – with some challenges including having significantly more students (with only one iLab teacher), fewer "special" courses (e.g., music, art, etc.), modified schedules due to low performance in core academic subjects for some grade levels, and unequal distribution of grade levels. All such challenges resulted in school principals making informed decisions about how best to ensure every student in the school received at least 18 hours of iLab programming, as proposed. For instance, Bethune Elementary provided services to students in Grades 3-5 in the first half of the year, and provided services to students in grades KG-2 during the second half of the program year.

Unfortunately, while the quality of programming was not reduced, the operational differences had some effect on quantity of services. As shown in Table 7, the iLab program appeared successful in providing the proposed number of days per student, with an overall average of 29.1 days of service per student. However, with the exception of Pioneer Park, none of the sites were successful in providing the 18 days of services to all students. Bethune and Belle Glade were the least successful, with only 74.5% and 87.4% (respectively) of enrolled students receiving at least 18 days of service. West Riviera was only slightly below the desired numbers, with only 19 students out of 657 not receiving 18 days of service – a difference easily accounted for by absences, pull-outs, and other unexpected situations. The program is encouraged to ensure all students receive adequate dosage of the 21st CCLC iLab program to help address approved objectives (e.g., double rotations or extra time to complete the entire project-based learning units adapted for the 21st CCLC ELT program). Regardless, the School District of Palm Beach County has done an extraordinary job of implementing the supplemental 21st CCLC ELT project-based activities throughout the school day, ensuring the vast majority of students are receiving the programming as often as possible.

Table 7: Total Student Enrollment vs. Students Attending 18+ Days

Site	Students Served: At Least One Day	Students Served: At Least 18 Days	Proportion of Students At Least 18 Days	Average Days Per Student
Belle Glade ES	563	492	87.4%	26.6
Bethune ES	479	357	74.5%	22.8
Pioneer Park ES	338	338	100.0%	36.5
West Riviera ES	657	638	97.1%	30.6
Total	2037	1825	89.6%	29.1

Note: Student enrollment is defined as the number of students attending the program for at least one day of 21t CCLC iLab operations. The program proposed to offer each student at least 18 days of programming, such that overall student enrollment is compared to the number of students attending the proposed minimum days.

REGULAR STUDENT ATTENDANCE

In addition to student enrollment (representing the number of students attending the 21st CCLC program for at least one day), it is important to explore student attendance in the 21st CCLC program activities. Attendance, as an intermediate outcome indicator, reflects the breadth and depth of exposure to programming. As such, the School District of Palm Beach County collected data on both (1) the total number of students who participated in 21st CCLC programming over the course of the year

(thus far), and (2) the number of these students meeting the United States Department of Education (USED) definition of "regular attendee" by participating in 21st CCLC activities for 30-days or more during the program year. The first indicator (total participants) can be utilized as a measure of the breadth of the program's reach, whereas the second indicator (regular participants) can be construed as a partial measure of how successful the program was in providing ongoing services to students. The US Department of Education has determined the minimum dosage for 21st CCLC programs to be impactful is 30 days of student attendance, though this was determined only for afterschool programs and arbitrarily applied to the 21st CCLC ELT programs under the ESEA Waiver. Regardless, the US Department of Education requires data to be reported to the Profile and Performance Information Collection System (PPICS) separately for students that attended at least one day (i.e., enrolled) and those attending at least 30 days of 21st CCLC activities (i.e., regularly participating students). While this "dosage" has not been clearly supported by research (particularly for programs operating during the school day), data is presented consistent with this threshold in order to match those data reported to the US Department of Education.

It is important to note that the School District of Palm Beach County never proposed that students would be served for at least 30 days, a relatively impossible level of service for one teacher in schools with hundreds of students. In fact, as mentioned in the prior section, the focus was on providing the 21st CCLC iLab programming for at least 18 hours of service (with curriculum units developed into 9 to 18 sections, thus allowing for the full project-based learning plans to be completed in the time allotted). Certainly, it was anticipated that all students would receive some level of 21st CCLC services during the school year, but it was never anticipated for students to receive 30+ days of service. Given the type of programming provided (i.e., during school programming) and the fact that students could not generally be served more than once per week, it was highly unlikely for a significant proportion of these students to meet the 30-day threshold established by the US Department of Education for afterschool programs.

As defined by the US Department of Education, it is reasonable to assume that regular attendees are more likely to represent those students who have received a sufficient "dose" of the 21st CCLC programming for it to have a positive impact on academic and/or behavioral outcomes. In order to show progress towards this federal metric, Table 8 provides a breakdown of total enrollment versus regular attendance (i.e., those who attended at least 30 days). As shown, the School District of Palm

Beach County 21st CCLC iLab Program was successful in reaching nearly all students with the 21st CCLC program, with 52.5% of the enrolled students attending 30 days of programming. This is not surprising and should **not** be considered a negative indictor for any of the 21st CCLC iLab program sites, wherein each student was proposed to be served only 18 days over the course of the year.

Table 8: Student Enrollment: Total vs. Regular (2013-2014)

	Total Enrollment *(Attending at least one day)*				Regularly Participating Enrollment *(Attending at least 30 days)*			
Investigation Lab	Summer 2013 Only	Academic Year 2013-14 Only	Both Summer/ Academic Year	Total	Summer 2013 Only	Academic Year 2013-14 Only	Both Summer/ Academic Year	Total
Belle Glade ES	--	563	--	563	--	169	--	169
Bethune ES	--	479	--	479	--	134	--	134
Pioneer Park ES	--	338	--	338	--	314	--	314
West Riviera ES	--	657	--	657	--	453	--	453
TOTAL	--	2,037	--	2,037	--	1,070	--	1,070

Note: The School District of Palm Beach County 21st CCLC ELT Grant only operates during the regular school day during the academic year. There are no "Traditional 21st CCLC" out-of-school services provided by this program. The program only proposed to provide 18 hours of service per student, at approximately one hour per day. As such, students were never anticipated to receive 30 days of programing, such that the low percentage of students considered "regularly participating" is expected.

AVERAGE DAILY ATTENDANCE

For the purposes of this evaluation, in addition to assessing progress towards regular student attendance, it is also important to explore whether the program is making progress towards meeting the proposed average daily attendance of student participants. This statistic serves several purposes for 21st CCLC programs. First, the level of funding provided by the Florida Department of Education is generally based on the number of students served by the program on a daily basis, rather than the number of students enrolled in the program (or even the percentage of regularly participating students). Although ELT programs do not utilize a funding request guide, which is used by out-of-school programs, the level of funding is still based in part on the number of students served per day. The logic for using average daily attendance as the funding metric is that programs may have 500 students enrolled, but only 50 students attending each day, such that they do not need staffing and other costs to support 500 students every day. As such, average daily attendance provides a better estimation of the required resources on an average day of operation. The second purpose for this statistic relates to program impact and quality - with high

average daily attendance suggesting that the program is more likely to provide students with maximum dosage to impact academic achievement and program objectives. Finally, when average daily attendance is compared to site enrollment, conclusions can be cautiously drawn about student retention and engagement.

It is important to note that the program never actually proposed to serve a specific number of students on a daily basis, with there being no mention of proposed average daily attendance within the grant application aside from the submitted Eligible Schools Table. The figures from the Eligible Schools Table are utilized for the summative evaluation, as these figures were also used by the evaluator in preparing the daily attendance spreadsheet for submission to the Florida Department of Education each month. While average daily attendance makes sense for the out-of-school 21st CCLC programs, as that is the basis of the out-of-school funding structure, it makes less sense for during school programs that do not provide out-of-school programming. Indeed, while out-of-school programs must work to retain students in their programming (hence the importance of average daily attendance as a measure of quality and student reaction to the program), during school programs need not retain the students, as the program is part of the regular school day and students are mandated to attend if they are in school. Regardless, the figures are presented herein to maintain consistency with data requested by the Florida Department of Education.

Data on the average daily attendance for each of the four (4) sites under the School District of Palm Beach County 21st CCLC iLab Project are provided in Table 9. As part of the application approved by the Florida Department of Education, the 21st CCLC Investigation Lab proposed to serve an average of 320 students per day of 21st CLC operation across all sites (80 students per day, per site). As shown in Table 9, the program achieved 108.3% of their proposed average daily attendance – with all four sites surpassing the minimum 80% threshold established by the Florida Department of Education for "high-risk" programs and suggesting that the program is likely to meet expectations of the FDOE based on the approved grant proposal.

Ultimately, based on these figures, the overall program would not be considered high-risk by the Florida Department of Education. If looking at individual program sites, it is noted that Bethune Elementary and Pioneer Park Elementary were both below the proposed 80 students per day average, but both were still over the 80% threshold. The program is encouraged to explore potential methods to improving the daily attendance at these sites, particularly Bethune Elementary (which is only slightly above the 85% moderate-risk threshold established by the Florida Department of

Education). Due to changing enrollment numbers at each school, it is important to cautiously interpret data presented on average daily attendance. The program should also be aware of how the proposed 80 students per day was established (e.g., 1 hour per class x 16 students per class x 5 classes per day = 80 students), as that will help ensure the program meets the proposal without exceeding classroom size restrictions.

Table 9: Average Daily Student Attendance by Month (2013-2014)*

Investigation Lab	Belle Glade	Bethune	Pioneer Park	W. Riviera	All Sites
August	91	61	79	115	346
September	147	66	84	126	423
October	98	51	88	126	363
November	95	50	72	121	338
December	83	59	85	123	350
January	73	56	71	120	320
February	80	72	72	99	323
March	79	73	73	114	339
April	74	70	71	115	330
May	65	105	64	112	346
June	53	115	47	105	320
ANNUAL TOTAL**	**88**	**68**	**74**	**116**	**346**
Proposed	80	80	80	80	320
% of Proposed	**109.5%**	**85.2%**	**92.9%**	**145.1%**	**108.3%**

*** "Average Daily Attendance" rounded up to next whole number. The average daily attendance for each site was calculated based on the days that particular site operated during the month. The total average daily attendance across sites is the sum of the individual site averages.*

*** The program only provides ELT (During School) 21st CCLC activities. The program does not provide afterschool, before-school, summer, or weekend/holiday programming through this 21st CCLC grant. As such, average daily attendance and enrollment are not provided within this summative report for these "traditional 21st CCLC" services (as all would be zero values)*

In order to better compare this 21st CCLC program to others in the state, the total student service hours are calculated (a product of the number of students and number of hours of operation). As shown in Table 10, the program provided 58,280 student service hours during the 2013-2014 academic year, since beginning services in August 2013. This equates to approximately $8.58 per student service hour, lower than many 21st CCLC programs in Florida, though higher than national averages for

out-of-school programs. It is important to note that "during school" programs often cost more to operate due to full-time teaching staff with full benefits, additional needs for curriculum that matches the regular school day, and increased number of students requiring materials and supplies.

Table 10: Overall Student Hours (Site and Program Totals)

Site	Average Daily Attendance	Days of Operation	Student Hours
Belle Glade ES	88	171	15,048
Bethune ES	68	160	10,880
Pioneer Park ES	74	166	12,284
West Riviera ES	116	173	20,068
Total	**--**	**--**	**58,280**

Note: The calculations estimate one hour per day of service per student, while students may have received services between 30 minutes and 180 minutes per day.

FEEDER SCHOOLS

The SDPBC iLab 21st CCLC program proposed to serve students from the same school where the sites are located. Because this is a during school program, there is no opportunity for the 21st CCLC program to serve students from outside the four elementary schools where services are located. As proposed, the SDPBC successfully targeted students at the propose schools, with 100% of student served by each site also enrolled in the same school. Although Table 11 presents limited information, the data are required for submission to the United States Department of Education. .

Table 11: Distribution of Students by Regular Schools Attended

School Name*	Number of Students	Proportion of Students from Identified School
Belle Glade Elementary School	942	100.0%
Bethune Elementary School	676	100.0%
Pioneer Park Elementary School	682	100.0%
West Riviera Elementary School	521	100.0%

** For PPICS, this information is reported at the site level. Each site will be indicated as their own respective feeder school, such that each site targets one school and all students come from that feeder school.*

STUDENT PARTICIPANT CHARACTERISTICS

When educators, administrators, and policymakers look at the academic and developmental impacts of educational programming, it is imperative that they attend to the issues of access and equity by addressing two important questions: "Who is being served?" and "How equitable is the quality of services across centers?" To better understand equity and the types of students being served in 21st CLCC programming, the School District of Palm Beach County Investigation Lab 21st CCLC Program submitted data on characteristics of all student participants served during the 2013-2014 program operational year. It is important to note the FLDOE released the "Summative Evaluation Reporting Requirements and Guidance – Expanded Learning Time (ELT) Program" on June 3, 2014, the final week of school for participating students. Within the guidance, three new demographic variables were asked to be included in the summative report: (1) age of student; (2) homeless status of students; and (3) whether students were from single parent households headed by a mother or father. These are certainly interesting variables, though these variables do not help define the equity of services provided at these schools, as all students are served regardless of these characteristics and the activities provided are not intended to address any of these three variables. In addition, the program had not received any guidance to include these uncommon variables prior to June 2014, such that none of these demographics were collected for use in the evaluation (the district does not collect or distribute such data on individual students due to privacy rules). It is important to note that this is a during school 21st CCLC ELT program, such that any apparent disproportional services between demographic groups is not due to characteristics of the 21st CCLC programming, recruitment efforts, or retention success. Rather, any differences in demographics are products of the total school enrollment at each site.

Student Grade Levels

Florida's 21st CCLC programs provide services to a wide range of student participants and their adult family members. To better understand the characteristics of students served by the School District of Palm Beach County Investigation Lab 21st CCLC ELT Program, data were provided on student grade levels served during the 2013-2014 program year. Of the 2,037 students enrolled in the 21st CCLC program, school grade levels were reported for all students. As shown in Table 12, the participating student population was composed of 51.9% kindergarten through second grade students and 48.1% third through fifth grade students. While all students

were in the traditional elementary school grades, this distinction between K-2 and 3-5 students is important for the purposes of the iLab 21st CCLC program, which differentiates services by these grade level groupings. Regardless, among the 2,821 participating students, there is a relatively equal distribution of students within each grade level served in 21st CCLC ELT programming. As such, while other 21st CCLC programs occasionally have difficulty serving all grade levels proposed, there does not appear to be any unique difficulties within the School District of Palm Beach County Investigation Lab 21st CCLC ELT program in serving students from any particular grade level. Given the low number of students that did not receive 21st CCLC services, there do not appear to have been any difficulties serving students from all grade levels across the entire school population. Data on regularly participating students (attending at least 30 days) is presented in Table 13. Although a small proportion of students, the distribution of regularly participating students is approximately equal to that of all students, with 50.7% kindergarten through second grade students and 49.4% third through fifth grade students.

Table 12: School Grade Levels: All Enrolled Students

2,037 Students	Grade In School*						
	K	1	2	3	4	5	Total
Belle Glade ES	84	126	88	90	103	72	563
Bethune ES	86	84	84	79	72	74	479
Pioneer Park ES	59	54	46	59	64	56	338
West Riviera ES	124	123	99	113	111	87	657
ALL SITES (N)	353	387	317	341	350	287	2,037
ALL SITES (%)	17.3%	19.0%	15.6%	16.8%	17.2%	14.1%	--

* *Grade levels are exclusive, as students can only be recorded in one grade level.*

Table 13: School Grade Levels: Regularly Participating Students

1,070 Students	Grade In School*						
	K	1	2	3	4	5	Total
Belle Glade ES	31	30	41	25	27	15	169
Bethune ES	0	15	0	40	38	41	134
Pioneer Park ES	56	46	46	47	63	56	314
West Riviera ES	93	98	86	57	43	76	453
ALL SITES (N)	180	189	173	169	171	188	1,070
ALL SITES (%)	16.8%	17.7%	16.2%	15.8%	16.0%	17.6%	

* *Grade levels are exclusive, as students can only be recorded in one grade level.*

Race and Ethnicity of Student Attendees

To better understand the types of students being served and to examine access to 21st CCLC services, the School District of Palm Beach County 21st CCLC Investigation Lab also submitted racial and ethnic data about those students participating in the 21st CCLC program. Of the 2,037 students enrolled in the 21st CCLC program during the 2013-2014 program year, ethnicity and race was reported for 1,941 students (95.3%). Looking at only those students on whom race/ethnicity was reported, as shown in Table 14, targeted 21st CCLC students were primarily identified as "Black" or "African American" (79.9%), with 20.6% identified by their parents or self-identified as "Hispanic/Latino(a)"; 1.4% identified as "white" or "Caucasian American"; 0.9% identified as "American Indian or Alaskan Native"; and 0.5% identified as "Asian or Pacific Islander." While this appears somewhat disproportionate to the overall School District of Palm Beach County population, this distribution is consistent with the overall composition of the targeted schools for 21st CCLC Investigation Lab programming. In addition, given the purposes of 21st CCLC ELT programs and the overall objectives of Florida to address and reduce the achievement gaps between the traditional 'majority' and traditional 'minority' populations of students, the fact that most students in the 21st CCLC iLab program are from the traditional 'minority groups' should be seen as a distinct strength and outstanding opportunity for this program to make tremendous impacts on Florida's achievement gaps. Overall, there do not appear to be any internal difficulties in serving students from all racial/ethnic groups represented in the overall school populations.

Table 14: Student Race and Ethnicity: All Enrolled Students

Site Name	N	Amr. Indian / Alaska Native	Asian/ Pacific Islander	Black or African American	Hispanic or Latino	White / Caucasian American	UKN
Belle Glade ES	523	0 (0%)	10*	323 (61.8%)	193 (36.9%)	10*	40
Bethune ES	423	0 (0%)	10*	403 (95.3%)	20 (4.7%)	10*	56
Pioneer Park ES	338	0 (0%)	0 (0%)	258 (69.2%)	107 (28.7%)	10*	0
West Riviera ES	657	10 (1.5%)	13 (1.9%)	567 (84.5%)	79 (11.8%)	10*	0
ALL SITES	1941	10 (0.5%)	17 (0.9%)	1551 (79.9%)	399 (20.6%)	28 (1.4%)	96

** Ethnicity categories are non-exclusive - students can be identified under multiple ethnicities. Those categories with "10*" indicate categories where there are fewer than 10 students. The minimum of 10 students is utilized, as requested by the School District of Palm Beach County. The totals for the program use the actual numbers in each category, such that the total for all sites may not utilize the "10*" minimums shown.*

Table 15 presents information on race and ethnicity for those students receiving services for at least 30 days during the 2013-2014 program year, defined as "regularly participating students" by the US Department of Education for 21st CCLC students. Although this represents a small portion of the overall student enrollment, the distribution approximates that of all enrolled students. As such, it does not appear the program inequitably served students from the various racial/ethnic groups.

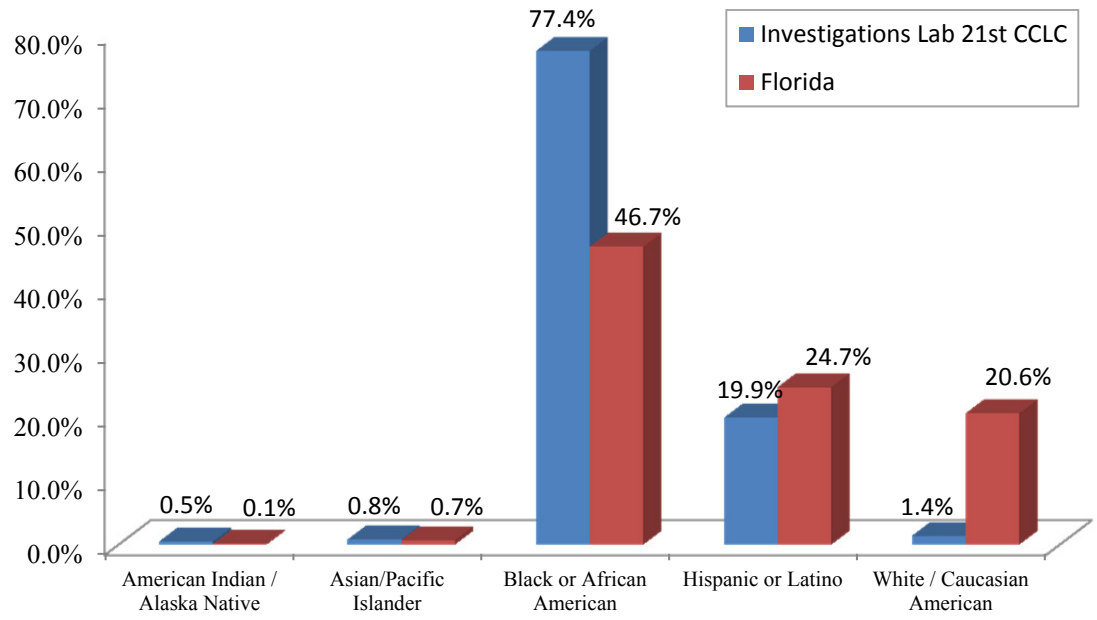
Table 15: Student Race and Ethnicity: Regularly Participating Students

Site Name	N	Amr. Indian / Alaska Native	Asian/ Pacific Islander	Black or African American	Hispanic or Latino	White / Caucasian American	UKN
Belle Glade ES	168	0 (0%)	0 (0%)	107 (63.7%)	57 (33.9%)	10*	1
Bethune ES	133	0 (0%)	10*	127 (95.5%)	10*	0 (0%)	1
Pioneer Park ES	314	0 (0%)	0 (0%)	234 (74.5%)	75 (23.9%)	10*	0
West Riviera ES	453	6 (1.3%)	10*	374 (82.6%)	61 (13.5%)	10*	0
ALL SITES	1068	6 (0.6%)	11 (1%)	842 (78.8%)	198 (18.5%)	15 (1.4%)	2

** Ethnicity categories are non-exclusive - students can be identified under multiple ethnicities. Those categories with "10*" indicate categories where there are fewer than 10 students. The minimum of 10 students is utilized, as requested by the School District of Palm Beach County. The totals for the program use the actual numbers in each category, such that the total for all sites may not utilize the "10*" minimums shown.*

When looking at the 62,302 students served in Florida's 21st CCLC centers during the prior program year, as shown in Figure 1 below, the majority of student participants across Florida are from traditionally-defined "minority groups" (72.1%), with 46.67% identified as Black/African American (n=28,143) and 24.65% identified as Hispanic/Latino(a) (n=14,866). The traditionally-defined "majority group" (i.e., White/Caucasian American) represented 20.63% of the student participants served by Florida's 21st CCLC funding (n=12,440). The School District of Palm Beach County 21st CCLC Investigation Lab Program, as shown in Figure 1, appears more successful than the average Florida program in serving students from traditionally defined "minority groups," such that the Investigation Lab 21st CCLC program is more likely to help address racial achievement gaps, as noted previously. It is important to note that the program serves the entire population at each school, such that differential enrollment is not indicative of recruitment efforts within the program, but is secondary to the enrollment of the targeted schools. Overall, the program does not appear to have internal complications serving students from all ethnic and racial groups represented within the targeted schools.

Figure 1: Distribution of Racial/Ethnic Classification: Florida vs. Program



Student Gender Distribution

In addition to ethnicity, it is also important to understand the degree to which the Investigation Lab 21st CCLC program achieved gender equity in their enrollment. Of the 2,037 students served during the 2013-2014 program year, gender was reported for 1,941 students (95.3%). Looking at only the students on whom gender was reported, as shown in Table 16, 50.4% of student attendees were identified as male, while 49.6% were identified as female. Table 17 presents information on regularly participating students (served at least 30 days), which presents a relatively equal distribution to that of all students enrolled (46.9% vs. 53.1%). Overall, the Investigation Lab 21st CCLC program achieved relative gender equity and provided services that appeared equally engaging students of both genders.

Table 16: Student Gender Distribution: All Enrolled Students

Site Name	N	Male	Female	Unknown
Belle Glade ES	523	253 (48.4%)	270 (51.6%)	40
Bethune ES	423	229 (54.1%)	194 (45.9%)	56
Pioneer Park ES	338	158 (46.7%)	180 (53.3%)	0
West Riviera ES	657	338 (51.4%)	319 (48.6%)	0
ALL SITES	**1941**	**978 (50.4%)**	**963 (49.6%)**	**96**

Table 17: Student Gender Distribution: Regularly Participating Students

Site Name	N	Male	Female	Unknown
Belle Glade ES	168	63 (37.5%)	105 (62.5%)	1
Bethune ES	133	62 (46.6%)	71 (53.4%)	1
Pioneer Park ES	314	147 (46.8%)	167 (53.2%)	0
West Riviera ES	453	229 (50.6%)	224 (49.4%)	0
ALL SITES	**1068**	**501 (46.9%)**	**567 (53.1%)**	**2**

Student Special Services Distribution

In addition to the above characteristics, another way of examining the equity and reach of the 21st CCLC program is to examine the participation of students with different special needs and backgrounds. As such, the School District of Palm Beach County Investigations Lab 21st CCLC Program reported data on the number of students eligible for three primary special services: Limited English Proficiency, Free or Reduced Price Lunch, and services for students with a Special Need or Disability. Of the 2,037 students served during the 2013-2014 program year, data on special services were reported for all targeted students. Distributions of those students on whom data were reported according to these demographic descriptors are shown in Table 18 (with Table 19 providing data on students receiving at least 30 days of service). Overall, data show that the School District of Palm Beach County iLab Program is providing 21st CCLC services to students that demonstrate the identified needs and target population proposed in the original grant application submitted to the Florida Department of Education. For instance, the vast majority (96.6%) of students qualifies for free or reduced lunch (one of the primary indicators for 21st CCLC programs in Florida), a large percentage of students (21.3%) speak English as their secondary language, and many are identified with a special need or disability (16.0%). The percentage of students speaking English as a second language is rather unique among 21st CCLC programs in Florida and across the nation. While this would present a challenge for most programs, it is important to note that the School District of Palm Beach County is well adapted to provide inclusive services to these students, with all 21st CCLC programs in the district providing Community Language Facilitators for verbal and written translation into almost any of the 142+ languages spoken in the School District or Palm Beach County.

Table 18: Student Special Needs: All Enrolled Students

2,037 Students	Limited English Proficient			Identified with Disability			Free/Reduced Price Lunch		
	Yes	No	UNK	Yes	No	UNK	Yes	No	UNK
Belle Glade ES	196 (37.5%)	326 (62.5%)	41	89 (17%)	433 (83%)	41	563 (100%)	0 (0%)	0
Bethune ES	12 (3%)	394 (97%)	73	59 (14.5%)	347 (85.5%)	73	409 (85.4%)	70 (14.6%)	0
Pioneer Park ES	117 (37.4%)	196 (62.6%)	25	72 (23%)	241 (77%)	25	338 (100%)	0 (0%)	0
West Riviera ES	99 (16.6%)	499 (83.4%)	59	74 (12.4%)	524 (87.6%)	59	657 (100%)	0 (0%)	0
ALL SITES	424 (23.1%)	1415 (76.9%)	198	294 (16%)	1545 (84%)	198	1967 (96.6%)	70 (3.4%)	0

** Note that figures associated with this data provide percentages based on only those students with data.*

Table 19: Student Special Needs: Regularly Participating Students

1,070 Students	Limited English Proficient			Identified with Disability			Free/Reduced Price Lunch		
	Yes	No	UNK	Yes	No	UNK	Yes	No	UNK
Belle Glade ES	65 (38.5%)	104 (61.5%)	0	31 (18.3%)	138 (81.7%)	0 (0.0%)	169 (100%)	0 (0%)	0
Bethune ES	6 (4.5%)	128 (95.5%)	0	15 (11.2%)	119 (88.8%)	0 (0.0%)	115 (85.8%)	19 (14.2%)	0
Pioneer Park ES	93 (32.2%)	196 (67.8%)	25	60 (19.1%)	241 (76.8%)	0 (0.0%)	314 (100%)	0 (0%)	0
West Riviera ES	67 (14.8%)	386 (85.2%)	0	46 (10.2%)	407 (89.8%)	0 (0.0%)	453 (100%)	0 (0%)	0
ALL SITES	231 (22.1%)	814 (77.9%)	25	152 (14.2%)	905 (84.6%)	0 (0.0%)	1051 (98.2%)	19 (1.8%)	0

** Note that figures associated with this data provide percentages based on only those students with data.*

Student FCAT Distribution

In addition to the previously discussed characteristics of students participating in the School District of Palm Beach County 21st CCLC Investigation Lab Project, it is also pertinent to explore how the 21st CCLC students are distributed among the categories of the prior-year Florida Comprehensive Achievement Test (FCAT). Overall, national PPICS data indicate that a significant number of youth participating in state-administered 21st CCLC programs are academically at risk. In the 32 states submitting state assessment results for a prior school year, almost half of the regular attendees served by 21st CCLC centers during this period scored below proficient on

the mathematics and/or reading/language arts portions of their state's assessment: 49 percent of students scored below proficient in mathematics, and 45 percent of students scored below proficient in reading/language arts. Within the state of Florida, a "Level 3" is considered to be at proficiency, while levels one and two are below and levels four and five are above proficiency.

As shown by submitted data to PPICS, 52.0% of 21st CCLC students across Florida, on whom FCAT Reading/Language Arts scores were reported, scored below the proficiency level set by the Florida Department of Education. In addition, 49.8% of students on whom FCAT mathematics scores were reported scored below the proficiency level. These results are similar to that reported by the United States Department of Education for all 21st CCLC programs across the nation, and are indicative that students with the highest level of academic need are being served by 21st CCLC programs. Although some students scored at the higher proficiency levels, this does not suggest they do not need the services of such a structured program. Rather, they may require less attention in reading or math, but may still require the many other services provided by the 21st CCLC program.

Specific to students attending the 21st CCLC Investigation Lab, only the students regularly attending the 21st CCLC program will be explored regarding student impact data (as per the US Department of Education). However, for use as a demographic variable, all enrolled students are included within Table 20. As shown, of the 2,037 attending students, 2012-2013 FCAT data were reported for 620 students (30.4%). Note that FCAT is not taken by students in grades K-2, with the vast majority of students without FCAT scores coming from the lower grade levels (K-3). It is noted that 43 students in 3rd grade have prior year FCAT scores, representing students that were retained in third grade for the current year. Those students in grades 4-5 without prior year FCAT scores are largely secondary to students in certain special classifications and/or students not in Florida the prior year.

As shown in Table 20, as well as Figures 2 and 3, the School District of Palm Beach County 21st CCLC Investigation Lab successfully targeted and enrolled students with the highest educational needs. Of the 620 students targeted by the 21st CCLC program with scores from the 2012-2013 (prior year) FCAT administration 72.7% were below proficient in Reading/ELA (N=451 of 620 with FCAT reading) and 57.3% were below proficient in mathematics (N=355 of 620). This proportion exceeds Florida's proportions, demonstrating that the Investigation Lab was more successful than most Florida programs in serving those students with the highest educational needs.

Table 20: Distribution of Participating Students by 2013 FCAT Levels

		N	Level 1	Level 2	Level 3	Level 4	Level 5
Reading / ELA	Belle Glade	164	73 (44.5%)	55 (33.5%)	21 (12.8%)	9 (5.5%)	6 (3.7%)
	Bethune	121	27 (22.3%)	47 (38.8%)	30 (24.8%)	14 (11.6%)	3 (2.5%)
	Pioneer Park	133	58 (43.6%)	45 (33.8%)	22 (16.5%)	6 (4.5%)	2 (1.5%)
	West Riviera	202	72 (35.6%)	74 (36.6%)	39 (19.3%)	15 (7.4%)	2 (1%)
	Total	620	230 (37.1%)	221 (35.6%)	112 (18.1%)	44 (7.1%)	13 (2.1%)
Mathematics	Belle Glade	164	62 (37.8%)	60 (36.6%)	34 (20.7%)	7 (4.3%)	1 (0.6%)
	Bethune	121	20 (16.5%)	40 (33.1%)	43 (35.5%)	14 (11.6%)	4 (3.3%)
	Pioneer Park	133	45 (33.8%)	37 (27.8%)	38 (28.6%)	9 (6.8%)	4 (3%)
	West Riviera	202	70 (34.7%)	58 (28.7%)	43 (21.3%)	25 (12.4%)	6 (3%)
	Total	620	197 (31.8%)	195 (31.5%)	158 (25.5%)	55 (8.9%)	15 (2.4%)

Figure 2: Distribution of Students by 2013 FCAT Language Arts Scores

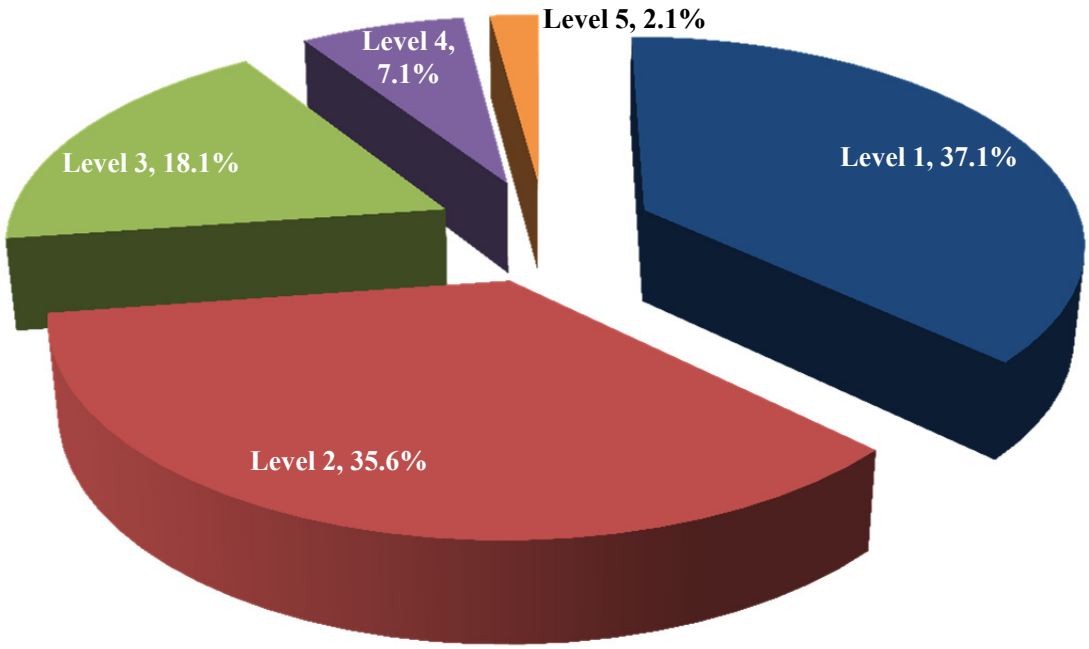
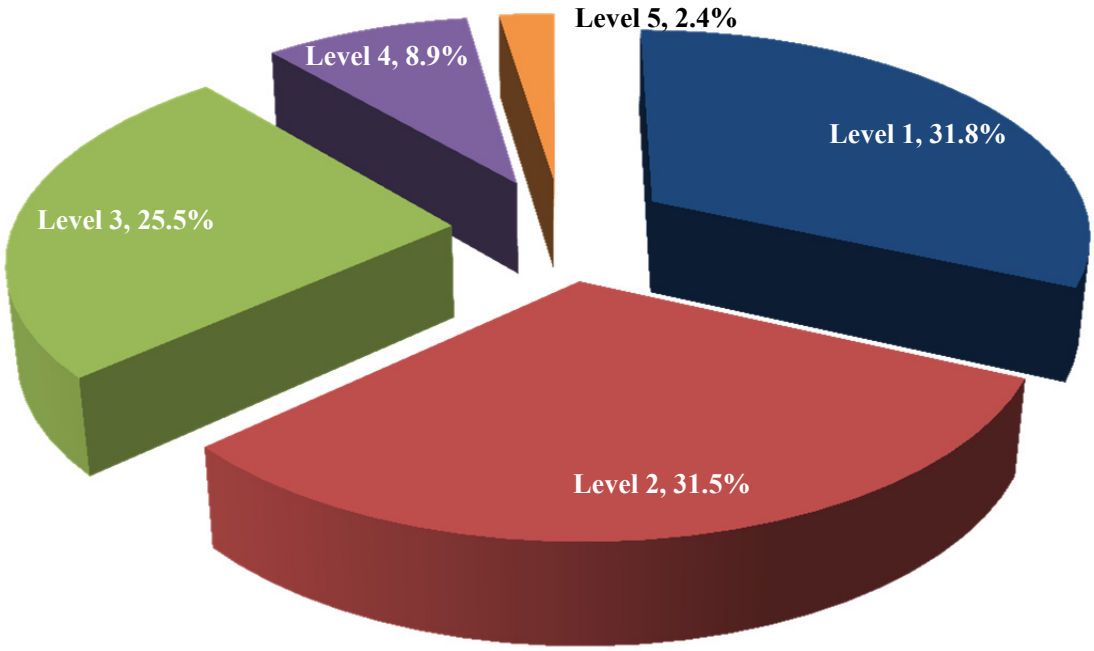


Figure 3: Distribution of Students by 2013 FCAT Mathematics Scores



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Objective Progress: Project-Based Academic Enrichment

Within the state of Florida, every 21st CCLC Extended Learning Time (ELT) program is required to provide a strong project-based learning atmosphere that integrates core academic subjects to foster a love of reading, science, technology, engineering, art and mathematics (STEAM). Federal law encourages programs to design activities that reinforce – but not mirror - topics taught during regular school instruction. Under the Florida 21st CCLC ELT initiative, the Florida Department of Education specifically indicates that programming should not be just "more of the same;" but it should involve careful planning to ensure services and activities will be used to improve student achievement and ensure a well-rounded education that prepares students for college and careers. Florida programs are given some level of flexibility in the dosage of academic, project-based activities to provide during any specific week of operation, with the School District of Palm Beach County Investigation Lab 21st CCLC ELT program proposing that each student would receive at l8 hours per year of project-based, academic-focused, teacher-provided activities. Regardless, activities were provided in such a dosage that the program was able to meet the proposed objectives included in the grant application. The program has written lesson plans and project-based learning plans for all 21st CCLC activities, ensuring the activities provided do not mirror the regular school day.

In addition to core academic remediation and enrichment (reading, math, and science), a second specific purpose of the Federal 21st CCLC initiative allows programs to offer students a broad array of personal enrichment activities that reinforce and complement the regular academic program and help participating students meet local and state academic standards in core subjects. Including a variety of personal enrichment activities helps retain and attract student participants, while also providing a well-rounded breadth of experiences to help increase student commitment to the education process. All personal enrichment activities must directly or indirectly support the academic achievement of participating students. According to Section 4205(A) of ESEA, as amended, 21st CCLC programs are limited to providing additional services within the following categories: Physical Education and recreation activities; Dropout Prevention and Character Education activities; Tutoring and mentoring services; Educational arts and music activities; Entrepreneurial education programs; Programs for limited English proficient students;

Telecommunications and technology education programs; Expanded library service hours; and/or Drug and violence prevention and/or counseling activities. The School District of Palm Beach County Investigation Lab 21st CCLC ELT Program was not required to propose activities within these personal enrichment categories, though may incorporate these activities in the future to assist targeted 21st CCLC students in meeting Florida's Common Core Standards and/or Florida's Next Generation Sunshine State Standards.

NEED-BASED OBJECTIVES

The School District of Palm Beach County 21st CCLC Investigation Lab Project developed individual objectives based on an assessment of student, parent, family, and community needs. Each of the annual objectives, as approved by the Florida Department of Education, was designed to be measurable, quantitative, challenging (yet achievable), and assessed throughout the project year (continuous assessment). In essence, objective-focused implementation of the 21st CCLC program helps ensure a strong, consistent, and measurable impact on the students and families served. All objectives are program-wide, with student-based objectives as follows:

1.1) 85% of actively participating STEM iLab students will demonstrate improved understanding and application of **scientific principles** consistent with Florida's Next Generation Sunshine State Standards, as demonstrated by such measures as pre-post assessments, school grades, and/or standardized test scores. *(Student Science Portfolios will be maintained to demonstrate engagement in activities and projects)*.

1.2) 80% of actively participating STEM iLab students will demonstrate improved knowledge, skills, & abilities in **mathematics** consistent with Common Core Standards, as demonstrated by such measures as pre-post assessments, grades, and/or standardized test scores (when available).

1.3) 80% of actively participating STEN iLab students will demonstrate increased **reading proficiency**, as demonstrated by such measures as school grades, standardized test scores, and/or district assessments.

1.4) 90% of actively participating STEM iLab students will express increased understanding and interest in the STEM fields of **science and engineering**, as demonstrated by such measures as pre-post assessments and/or student interest surveys.

1.5) 80% of actively participating STEM iLab students will show increased **dedication, motivation, and commitment to the educational process**, as demonstrated by teacher surveys on work completion and active participation and/or student surveys.

1.6) 90% of school teachers whose students participate in the STEM iLab Project will express **teacher satisfaction** with the 21st CCLC project and a positive impact on their ability to navigate the extended school day, as demonstrated by such measures as teacher feedback surveys and/or teacher interviews.

STUDENT ACTIVITIES PROVIDED

The School District of Palm Beach County 21st CCLC Investigation Lab Program developed and implemented project-based learning activities aligned to the approved 21st CCLC academic objectives. It is important to note that the Florida Department of Education does not require each activity to have a separate objective, such that multiple activities can be provided under a single objective and/or one activity can be provided to support multiple objectives (e.g., an objective for science might include robotics, technology, and rocketry activities; while a robotics activity can support reading, math, and science). As per federal law and state rules, programs are only permitted to provide activities that will help meet the stated objectives approved by the Florida Department of Education (i.e., objective-driven activities). The proposed activities are detailed in the approved grant application, and the program adhered to those specified activities, with the addition of some additional project-based learning activities that support the approved objectives. The following provides a brief summary of those activities proposed in support of the objectives.

The 21st CCLC STEM Investigation Lab (iLab) and all associated 21st CCLC activities were carried out by full-time Certified Teachers at each the four targeted schools, each of which have been mandated by the state to extend their learning day with one hour of additional reading. The 21st CCLC STEM iLab focuses on providing students supplemental science and engineering instruction using research-based curriculum. In support of the initiative, each Principal agreed to provide a dedicated classroom for the 21st CCLC STEM iLab at no cost to 21st CCLC. All activities occurred during the school day, and every student in the school was provided a rotation through the 21st CCLC STEM iLab at some point during the school year. The original intent was for all students to receive at least 18 hours of STEM iLab activities during the year.

The 21st CCLC iLab activities were created following careful planning by SDPBC Elementary Science Department to help ensure the overall program will improve student achievement and enhance the well-rounded education that prepares students for future college and career success. All activities are focused on problem-based and project-based learning that is creative, hands-on, fun, and designed to foster a love of science, technology, engineering, art and mathematics (STEAM). The activities within the 21st CCLC iLab Project are designed to creatively reinforce reading, math, and science topics taught during the regular school day. Activities were based on best-practices for STEM project-based learning. Comprehensive, theme-based curriculum incorporates high-interest books, shared readings, and hands-on learning activities. Activities align to the Common Core Standards and/or Florida's Next Generation Sunshine State Standards.

Engineering is Elementary (EiE): EiE is the primary curriculum used within the 21st CCLC iLab Project-Based learning environment. Children are born engineers—they are fascinated with building, with taking things apart, and with how things work. However, K-12 educational settings have traditionally done little to develop children's engineering and technological literacy. The Engineering is Elementary (EiE) project fosters an understanding of engineering, technology, and literacy among elementary school students and educators. EiE is research-based, standards-driven, and classroom-tested curriculum that integrates engineering and technology concepts and skills with elementary science and literacy topics. EiE lessons not only promote science, technology, engineering, and mathematics (STEM) learning in grades K-5, but also connect with literacy and social studies. EiE has reached over 2.7 million students and 32,000 teachers in all fifty states. All EiE units are tested and evaluated at all stages of development, and all units are research-based where each unit is tested with a national audience, with student learning assessed using a pre- and post-assessments and compared against a matched national sample of classrooms collecting control data (e.g., Cunningham, Lachapelle & Hertel, 2012; Jocz & Lachapelle, 2012; Moffett, Weis, & Banilower, 2011).

Each EiE unit integrates an elementary science Florida State Standard with a specific field of engineering. Unit lessons are designed to engage students in the engineering design process through a variety of methods. First, literature books featuring child characters from a variety of cultures and backgrounds introduce students to an engineering problem. Student then are challenged to solve a problem similar to the one faced by the main character. In addition to providing a context, the literature also

introduces engineering and technology terms, and reinforces state science benchmark vocabulary. Second, detailed unit lesson plans and teacher guides are provided that tie-in the learning objectives with science vocabulary and content. Third, multiple learning activities are provided in two versions to accommodate the cognitive and linguistic abilities of the learner: basic (lower reading level, writing, and cognitive complexity for grades K-2) and advanced (higher reading level, writing, and cognitive complexity for grades 3-5). Fourth, assessments and rubrics with multiple choice and open ended questions are provided to gage the learners understanding. Finally, background information and additional resources are provided for the teacher to further their understanding about the concepts.

A total of 12 EiE curricula units will be used within the 21st CCLC iLab Project, with the units staggered throughout the three-year project period. These units were selected to allow students to apply science knowledge in a hands-on engineering context. The following units were selected: (1) Sounds Like Fun!: Seeing Animal Sounds; (2) Catching the Wind: Designing Windmills; (3) A Long Way Down: Designing Parachutes; (4) Taking the Plunge: Designing Submersibles; (5) The Attraction is Obvious: Designing Maglev Systems; (6) A Sticky Situation: Designing Walls; (7) Now You're Cooking: Designing Solar Ovens; (8) Lighten Up: Designing Lighting Systems; (9) The Best of Bugs: Designing Hand Pollinators; (10) Solid as a Rock: Replicating an Artifact; (11) An Alarming Idea: Designing Alarm Circuits; and (12) No Bones About It: Designing Knee Braces. Note that not all grade levels receive all units, and the units will be spread across the three years of programming. As the same students will be served for up to three years, it becomes important to stagger application of these units to allow continuing students to engage in different units over the course of the three years.

Robotics: This is a secondary project component that makes use of research-based Lego robotics curriculum (http://www.legoeducation.us/) to provide a comprehensive reading, mathematics, and science project-based environment. The LEGO® Education WeDo curriculum introduces elementary school students to robotics through building models with motors and sensors; programing models; and exploring a series of cross-curricular, theme-based activities while developing their skills in science, technology, engineering, mathematics, language and literacy. Students will engage in additional activities that support and expand the overall robotics curriculum. Additional elements may include research-based art projects, scale drawings of robots, age-appropriate reading books, and exploring various science

concepts through robots. Individual teachers are provided flexibility to apply the robotics curriculum and additional elements in keeping with the abilities of the students and the progress on the primary EiE component.

Earth Warriors: This was an optional multi-project theme (based on student interest), including projects on gardening, earth events, nature, and environmental service learning. Students can engage in a variety of activities throughout the year, with each project incorporating elements of reading (e.g., reading books, researching topics), writing (e.g., short stories, poems, songs), mathematics (e.g., comparing own height to different plants, measuring growth, converting units with lava flow, etc.), and science (e.g., volcanos, hurricanes, tornados, oceans, flowers, plants, etc.). To enhance these projects, students can engage in activities that provide real-world, hands-on applications of concepts they are learning – including building models (e.g., volcanoes, tornado tubes), growing edible gardens, learning about fertilizers and natural pest control, plant growth experiments, and engaging in service learning about environmental preservation and pollution prevention. If applied, the Florida Department of Agriculture and Florida 4-H will provide student resources, lessons, and activities on science and service learning topics specific to Florida (e.g., agriculture, aquaculture, forests, plants and animals). During the first year of operations, no site has begun implementing the optional Earth Warriors project, as the primary EiE component has taken longer to implement than originally anticipated. The program is encouraged to retain this element as an optional component, leaving it up to individual schools and teachers whether to implement this element.

Overall, the curriculum for the 21st CCLC iLab Project was developed or adopted to promote exciting learning experiences through project-based learning. Students engaged in a variety of problem-based learning activities, using hands-on exploration and discovery projects that enrich knowledge, understanding, and skills in science and math. Curriculum and instructional practices have been modified or implemented to meet the needs of diverse learners, and all students in the school have the opportunity to participate in the 21st CCLC STEM iLab. In addition to hand-on STEM projects, the students will engage in numerous reading and writing activities that support the overall STEM model and help enhance the school's abilities to close achievement gaps in reading and mathematics. Reading and writing are integrated into project-based learning units to build background knowledge and create subject comfort to motivate students to explore their ideas. To support reading, students are creating personalized STEM journals to record ideas and observations as they solve

STEM problems. This approach ensures continuity of the program, enhances creativity of students, and supports the State's Annual Measurable Objectives.

The table below provides general summarized information about the specific EiE activities and units planned to be covered with students. Note that these are the proposed units across three years of program operation, and not expected to be done within a single year of operations. Also, the table indicates students will receive services across 12 weeks, with the times per day and days per week slightly different by grade level. It is important that school principals have flexibility in scheduling the iLab services to maximize services to the students and teachers involved. As such, while the timeframe is provided as an estimate, during the second year of operations, each school will provide the following minimum operations (which may be provided across 12 weeks, 24 weeks, or even the entire 36-week school year):

- Grade K: 1,080 minutes or 18 hours/year
- Grade 1: 1,080 minutes or 18 hours/year
- Grade 2: 1,080 minutes or 18 hours/year
- Grade 3: 1,440 minutes or 24 hours/year
- Grade 4: 1,800 minutes or 30 hours/year
- Grade 5: 1,800 minutes or 30 hours/year

Activities	*End Product*	*Timeframe*
EiE (K-2): Sounds Like Fun!: Seeing Animal Sounds	Learners apply their understanding of the properties of sounds to plan, create, test, and improve their own 'bird call' instruments.	6 weeks 30 min./day 3 days/week
EiE (K-2): Catching the Wind! Designing Windmills	Learners apply their understanding of energy and work to plan, create, test and improve their own windmills.	6 weeks 30 min./day 3 days/week
EiE (K-2): A Long Way Down! Designing Parachutes	Learners apply their understanding of gravity and air resistance to plan, create, test, and improve their own parachutes.	6 weeks 30 min./day 3 days/week
EiE (K-2): Taking the Plunge! Designing Submersibles	Learners apply their understanding of mass, volume, sinking, and floating to plan, create, test, and improve devices to retrieve packages off the bottom of a model ocean floor.	6 weeks 30 min./day 3 days/week
EiE (K-2): The Attraction is Obvious! Designing Maglev Systems	Learners apply their understanding of magnetism to plan, create, test, and improve their own levitating vehicle system that carries packages without touching the ground.	6 weeks 30 min./day 3 days/week

Activities	*End Product*	*Timeframe*
EiE (K-2): A Sticky Situation! Designing Walls	Learners apply their understanding of the properties of soils to plan, create, test, and improve their own mortar mixtures that strengthen a wall.	6 weeks 30 min./day 3 days/week
EiE (3-5): Now You're Cooking! Designing Solar Ovens	Learners apply their understanding of light and heat to plan, create, test, and improve their own solar cookers.	6 weeks 30 min./day 4 days/week
EiE (3-5): Lighten Up! Designing Lighting Systems	Learners apply their understanding of light and mirrors to plan, create, test, and improve their own lighting systems.	6 weeks 30 min./day 4 days/week
EiE (3-5): The Best of Bugs! Designing Hand Pollinators	Applying their understanding of insects, life cycles, and pollination, the learner designs and improves a hand pollinator to work with different model flowers.	6 weeks 30 min./day 5 days/week
EiE (3-5): Solid as a Rock: Replicating an Artifact	Learners apply their understanding of the rock cycle and the properties of minerals to design a replica of an ancient artifact for a museum.	6 weeks 30 min./day 5 days/week
EiE (3-5): An Alarming Idea: Designing Alarm Circuits	Applying their knowledge of electricity, circuits, conductors, and insulators, learners design, create, and improve their own alarm circuits and switches to remind them when it is time to do important chores.	6 weeks 30 min./day 5 days/week
EiE (3-5): No Bones About It: Designing Knee Braces	After exploring the properties of various materials available to them, learners apply their understanding of human muscles and the skeletal system to build a brace that restores the normal range of motion of a knee joint.	6 weeks 30 min./day 5 days/week

OBJECTIVE PROGRESS: FCAT

Florida Comprehensive Achievement Test (FCAT)

As one of the primary GPRA indicators for 21st CCLC programs across the nation, it is important to first explore data related to the progress of the School District of Palm Beach County Investigation Lab 21st CCLC Program in terms of student improvement on standardized assessments in English Language Arts (Reading), Mathematics, and Science. Within Florida, most students take the Florida Comprehensive Achievement Test (FCAT) towards the end of the academic year

beginning in the third grade. Overall, national PPICS data indicate that, among the 32 states submitting state assessment results for a prior school year, almost half of the regular attendees served by 21st CCLC centers scored below proficient on the mathematics and/or reading/language arts portions of their state's assessment: with 49 percent scoring below proficient in mathematics and 45 percent scoring below proficient in reading/language arts. Within the state of Florida, a "Level 3" is considered to be at proficient, while levels two and one are below proficiency and levels four and five are above proficiency. Specific to students attending the School District of Palm Beach County Investigation Lab 21st CCLC Program, 2,037 students served by the 21st CCLC program and attending the four iLab schools are discussed regarding student impact data for the purposes of the summative evaluation. Note that many 21st CCLC programs and the US Department of Education focus only on the students attending at least 30 days of programming, though the 21st CCLC STEM iLab project did not propose to use this arbitrary method of reducing the student sample – rather all objectives focus on assessing progress of all active students (regardless of participation level). However, in some instances within the summative report, the definition of "regularly participating student" is utilized to be consistent with the US Department of Education and their online reporting system (PPICS).

Prior Year FCAT (2012-2013)

As shown in Table 14, of the 2,037 attending students, 2012-2013 FCAT data were reported for 620 students (22.0%). Note that FCAT is not taken by students in grades K-2, with the vast majority of students without FCAT scores coming from the lower grade levels (K-3). It is noted that 43 students in 3rd grade have prior year FCAT scores, representing students that were retained in third grade for the current year. In addition, less than 50 students in grades 4-5 did not have prior year FCAT scores, largely secondary to FCAT not being taken by students in certain special classifications and/or students not in Florida the prior year. Prior year Science FCAT assessment results were not provided, though for the purposes of objective progress, the prior year Science FCAT is generally not applicable, as it is only provided in specific grade levels (i.e., 5th grade) such that very few students taking these FCAT in 2013 will also take the test in 2014 (i.e., retained 5th graders). As such, Science FCAT scores are discussed in later sections of the report, but not under the baseline data on statewide standardized assessments.

Ultimately, the School District of Palm Beach County 21st CCLC Investigation Lab successfully targeted and enrolled students with the highest educational needs. Of the

620 students served by the 21st CCLC program with scores from the 2012-2013 (prior year) FCAT administration, 72.7% were below proficient in Reading/ELA (N=451 of 620 with FCAT reading) and 57.3% were below proficient in mathematics (N=355 of 620). This proportion exceeds Florida's proportions, demonstrating that the Investigation Lab was more successful than most Florida programs in serving those students with the highest educational needs. These FCAT scores are important to establish a baseline of student achievement towards the end of the prior year and, with some level of accuracy, their baseline level for the 2013-2014 academic year.

Table 21: Distribution of Regularly Participating Students by FCAT Levels

	N	Level 1	Level 2	Level 3	Level 4	Level 5
Reading / ELA	620	230 (37.1%)	221 (35.6%)	112 (18.1%)	44 (7.1%)	13 (2.1%)
Mathematics	620	197 (31.8%)	195 (31.5%)	158 (25.5%)	55 (8.9%)	15 (2.4%)

Note: Not all students take the FCAT assessments.

Current Year Predicted FCAT (2013-2014)

The 2013 FCAT levels help describe the student population as they entered the 21st CCLC program, while the 2014 FCAT levels help describe the student population after participation in the 21st CCLC program. It should be noted that there is no reliable method for estimating the actual impact of the 21st CCLC program using such single-administration achievement tests, as a large number of variables have influence (e.g., regular school teachers, parent involvement, home environment, etc.). This difficulty is somewhat reduced through interim assessments that predict a student's FCAT score, thus providing some indication as to the student's growth from the prior year and within the current year. As such, in addition to actual FCAT scores from the 2012-2013 academic year, the School District of Palm Beach County 21st CCLC Investigation Lab Project also provided predicted standardized test (FCAT) scores from the 2013-2014 school year. These predicted FCAT levels were obtained from standardized diagnostics provided by The School District of Palm Beach County in the Fall and Winter of the 2013-2014 academic school year.

Of the 2,037 students served in the four targeted schools, 2014 Fall Diagnostic Predicted FCAT scores were provided on 932 students (45.4%) and 2014 Winter Diagnostic Predicted FCAT scores were provided on 956 students (46.9%), with the remaining students not receiving the diagnostic testing because they are not in grades

assessed by the FCAT (i.e., Grades 3-5). As with prior year FCAT scores, as shown in Table 22 (Fall Diagnostic), Table 23 (Winter Diagnostic), and Figure 4; the majority of students were predicted to score below proficiency. In fact, during the Fall Diagnostic, 69.0% of students were predicted to score below proficient on the reading FCAT, 65.4% were predicted to score below proficient in mathematics, and 68.6% were predicted to score below proficient in science. The predictions were somewhat worse come the Winter Diagnostic, with 72.7% of students were predicted to score below proficient on the reading FCAT, 67.3% in mathematics, and 72.5% in science. As with actual FCAT scores, although some students are predicted to score at the higher proficiency levels, this does not suggest they do not need the services of such a structured 21st CCLC program. Rather, while they may require less attention in reading, math, or science; they may still require the many other services provided by these programs and may still be struggling in academic courses or other personal enrichment areas (e.g., commitment to education). These predicted scores are compared to actual 2014 FCAT results later in this report. Fall and Winter Diagnostic Predicted FCAT scores are presented here, as they are better indicators of baseline ability than the prior year FCAT scores required by the US Department of Education, such that both are used to complete cross-year and within-year comparisons for demonstration of student progress in the next sections of this report.

Table 22: Predicted 2014 FCAT Achievement Levels (Fall Diagnostic)

	N	Level 1	Level 2	Level 3	Level 4	Level 5
Predicted Reading	932	326 (35.0%)	317 (34.0%)	204 (21.9%)	70 (7.5%)	15 (1.6%)
Predicted Math	921	320 (34.7%)	282 (30.6%)	247 (26.8%)	59 (6.4%)	13 (1.4%)
Predicted Science	927	331 (35.7%)	305 (32.9%)	212 (22.9%)	60 (6.5%)	19 (2.0%)

Note: Not all students take the FCAT Diagnostic assessments.

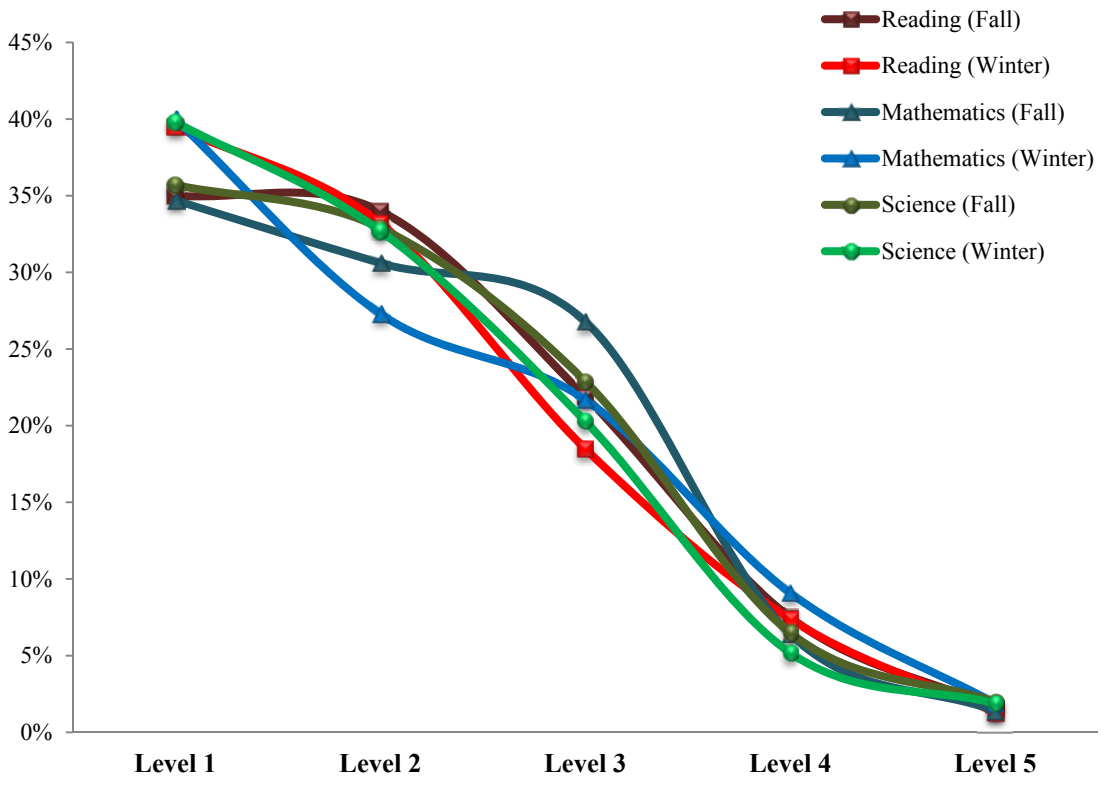
Table 23: Predicted 2014 FCAT Achievement Levels (Winter Diagnostic)

	N	Level 1	Level 2	Level 3	Level 4	Level 5
Predicted Reading	956	378 (39.5%)	317 (33.2%)	177 (18.5%)	71 (7.4%)	12 (1.3%)
Predicted Math	950	380 (40.0%)	259 (27.3%)	206 (21.7%)	86 (9.1%)	18 (1.9%)
Predicted Science	947	377 (39.8%)	310 (32.7%)	192 (20.3%)	49 (5.2%)	18 (1.9%)

Note: Not all students take the FCAT Diagnostic assessments.

Figure 4 presents predicted FCAT levels from all three core subjects (reading, mathematics, and science) from both the Fall and Winter diagnostic assessments. The significant overlap that makes it somewhat difficult to identify individual distribution lines also helps illustrate the fact that the distributions across subjects and time are relatively equal. In fact, there does not seem to be a "strong subject" or significant change within any core academic subject from the Fall to Winter diagnostics. This becomes important when looking at within-year comparisons, as the general distribution of all levels (Figure 4) would suggest that students were unlikely to have changed from Fall to Winter. This is further explored in the following report sections.

Figure 4: Distribution of Students by 2013 Predicted FCAT Levels



Current Year FCAT (2013-2014)

The final set of FCAT data presented in the summative report (prior to presenting within-year and cross-year comparisons) is the current year FCAT scores on the three core academic subjects (i.e., reading, mathematics, and science). As shown in Table 24, of the 2,037 attending students, 2013-2014 FCAT data were reported for 961 students (47.2%). As with prior year FCAT scores, the FCAT is not taken by students in grades K-2, with 1,057 of the students without FCAT scores coming from the lower grade levels (K-2). Overall, only 19 students who did not have 2014 FCAT

scores were in grades 3-5, representing those students who had not attended enough days of school and/or were provided an alternative assessment due to special needs. It is important to note that the School District of Palm Beach County provides diagnostic assessments to some students (particularly second grade) that do not take the FCAT assessments, hence why there are more diagnostic assessment results than FCAT results. For instance, FCAT Science is only taken by 5th grade, representing only 14.1% of the students served by this 21st CCLC STEM iLab project (N=287).

Ultimately, the School District of Palm Beach County 21st CCLC iLab provided 2014 FCAT scores for 961 students – 961 students had reading scores, 961 students had mathematics scores, and 283 students (5th grade only) had science scores. Of the students served by the 21st CCLC program with scores from the 2014 FCAT administration, 74.0% were below proficient in Reading/ELA (N=711 of 961 with FCAT reading), 65.0% were below proficient in mathematics (N=625 of 961), and 73.5% were below proficient in science (N=208 of 283). These proportions exceed proportions for average students across Florida, demonstrating that the iLab was successful in serving those students with the highest educational needs. As shown in Figure 5, the distribution of levels is expectedly similar to that of the Fall and Winter diagnostic assessments (both are designed to predict FCAT levels).

Figure 5: Distribution of Students by 2014 FCAT Levels

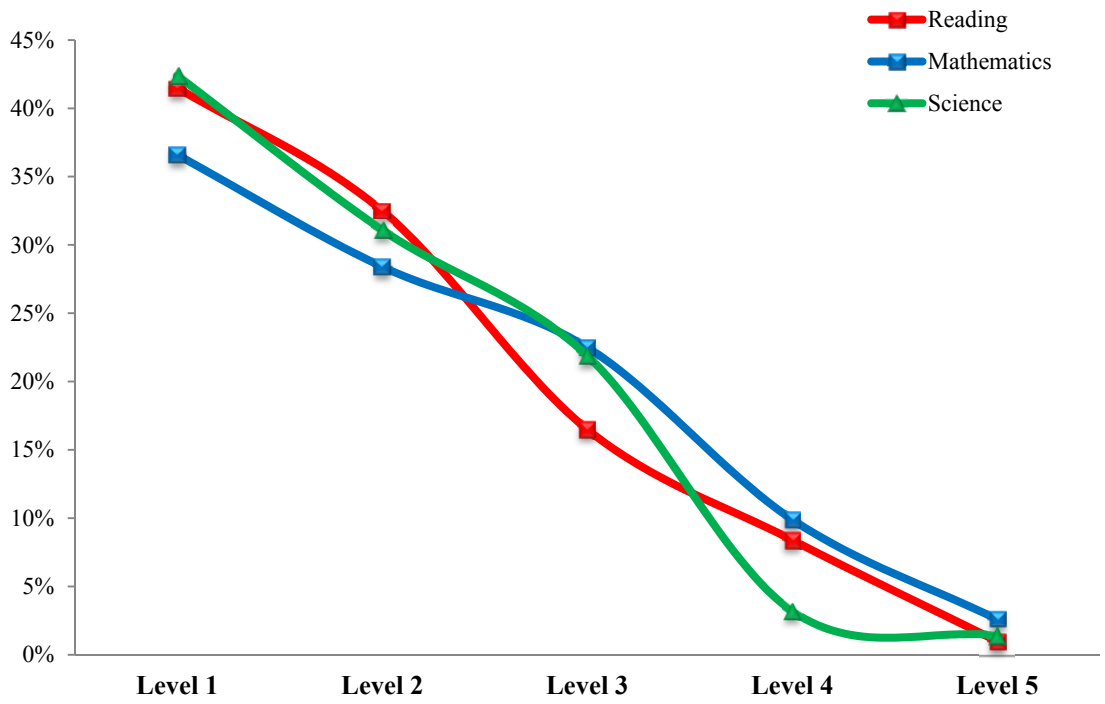


Table 24: Distribution of Students by 2014 FCAT Levels (Current Year)

	N	Level 1	Level 2	Level 3	Level 4	Level 5
Reading / ELA	961	399 (41.5%)	312 (32.5%)	159 (16.5%)	81 (8.4%)	10 (1%)
Mathematics	961	352 (36.6%)	273 (28.4%)	216 (22.5%)	95 (9.9%)	25 (2.6%)
Science	283	120 (42.4%)	88 (31.1%)	62 (21.9%)	9 (3.2%)	4 (1.4%)

FCAT-Based Student Growth

While distribution of prior year, predicted, and current FCAT scores provides some indication of the potential impact of the 21st CCLC program on students, it is important to explore whether there was actual growth of students enrolled in the 21st CCLC program. Unlike most districts in Florida, the School District of Palm Beach County provides two diagnostic tests that are designed to specifically predict a student's FCAT levels in reading, mathematics, and science. The diagnostic scores provide both an IRT scale score (similar to the Developmental Scale Score) and the predicted FCAT level from the IRT score. In order to assess this Federal GRPA indicator within the formative report, two comparisons are made using actual and predicted FCAT scores (Cross-Year and Within-Year Comparisons).

Cross-Year Comparison: The first analysis involved comparing actual FCAT reading and mathematics scores from the 2012-2013 academic year to actual FCAT scores obtained during the 2013-2014 academic year. This Cross-Year Comparison is the most common comparison used by the US Department of Education. It is important to note that there are many caveats when exploring this type of comparison. For instance, no students within the targeted schools have Science FCAT scores from the prior year, as students take the Science FCAT at the end of the 5th grade. As such, cross-year comparisons cannot be made for Science FCAT (within-year comparisons for science are the most appropriate). When both years of FCAT data are available, comparisons between FCAT scores must be done carefully and consistent with Florida Department of Education guidance on such comparisons.

Using data obtained from The School District of Palm Beach County and checked against the guidance and procedures provided by the Florida Department of Education, student FCAT 2.0 scores from 2012-13 were compared to FCAT 2.0

scores from 2013-14. Looking at the 2,037 students served within the Investigation Lab 21st CCLC Program, 637 students were in grades where both years of FCAT scores would be available (i.e., 4th and 5th grades). Of these students, 613 students had both 2012-13 and 2013-14 FCAT Reading Levels (96.2%) and 603 students had both 2012-13 and 2013-14 FCAT Mathematics Levels (84.7%). Both level-based and score-based comparisons are provided, with the US Department of Education only completing a level-based comparison. Level-based comparisons are inherently less powerful and less appropriate for detecting individualized differences, as they have limited variability (1-5) and students are pigeon holed into these categories (technically, three categories: below, meeting, or above proficiency). Developmental Scale Scores are far more variable and allow for a more appropriate comparison of students across years, using procedures established by the Florida Department of Education. Indeed, Developmental Scale Scores can show knowledge growth and progression that might not be as readily apparent with level-based scores (e.g., a student going from Level 4 to Level 4 will not look like growth, but would have had to increase significantly in their developmental scale score to maintain the Level 4 achievement category).

As shown in Table 25 and Figure 6, the Cross Year Comparison demonstrates that a large proportion of students demonstrated growth in both FCAT Reading and FCAT Mathematics when comparing students from 2013 to 2014. More specifically, 34.7% of students demonstrated level-based growth in FCAT Reading from the prior year to the current year FCAT, where level-based growth includes those students increasing from below proficient to proficient and/or maintaining proficiency across the two years. This proportion is more impressive when looking at the proportion of students with improved Developmental Scale Scores, wherein 75.5% of actively participating 21st CCLC iLab students demonstrated improved FCAT Reading Developmental Scale Scores from the 2013 FCAT to 2014 FCAT. In terms of mathematics, 40.0% of students demonstrated level-based growth in FCAT Mathematics from the 2013 FCAT to the 2014 FCAT, where level-based growth includes those students increasing from below proficient to proficient and/or maintaining proficiency. More impressively, 72.6% of actively participating 21st CCLC iLab students demonstrated improved FCAT Mathematics Developmental Scale Scores from the 2013 FCAT to 2014 FCAT. Again, FCAT Level comparison is less accurate in demonstrating growth, but this is included in the report due to the widespread use of levels and because the US Department of Education requires 21st CCLC programs to report FCAT Levels to demonstrate student growth in the Reading and Math core academic subjects. In addition to caution about interpreting FCAT levels, it is important to note,

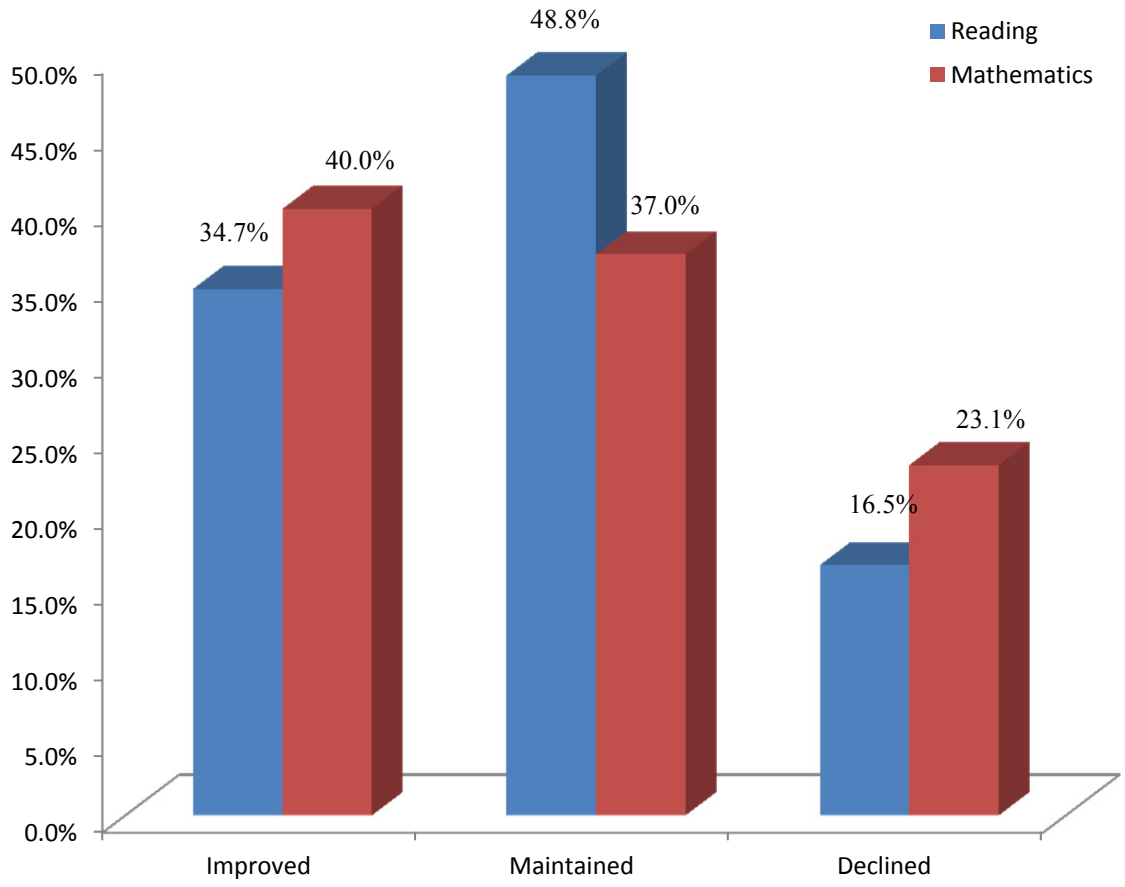
as with any indicator of progress, that FCAT growth cannot be directly and solely attributed to the 21st CCLC program.

Table 25: Cross-Year Comparison: Actual 2013 FCAT to Actual 2014 FCAT

	Reading FCAT		Mathematics FCAT	
	Level Change	*DSS Change*	*Level Change*	*DSS Change*
Improved (Proficient)	213 (34.7%)	463 (75.5%)	241 (40.0%)	438 (72.6%)
Maintained	299 (48.8%)	17 (2.8%)	223 (37.0%)	10 (1.7%)
Declined	101 (16.5%)	133 (21.7%)	139 (23.1%)	155 (25.7%)
TOTAL	613		603	

** Level change includes those students that increased levels or maintained proficiency from the 2013 FCAT to the 2014 FCAT administration. DSS change considers actual score change of the DSS from 2013 to 2014.*

Figure 6: Student Level-Based Growth on FCAT Math and ELA



Within-Year Comparison: The second method of utilizing actual and predicted FCAT scores to determine progress toward the proposed 21st CCLC academic objectives is the Within-Year Comparison. For the purposes of the summative report, two types of within-year comparisons are provided: (1) predicted 2014 FCAT scores and actual 2014 FCAT scores (reading, mathematics, and science); and (2) fall versus winter predicted FCAT scores for science. As with the cross-year comparison, only students taking both the FCAT diagnostics are included within the comparison, with students taking only one diagnostic assessment excluded for lack of comparison. As mentioned above, it is important to note students that have recently immigrated to the United States might not receive scores on the FCAT, while other students do not take the FCAT for a variety of other reasons (e.g., K-2nd graders do not take the FCAT).

The first within year comparisons are for predicted versus actual FCAT scores. It is important to note the only way to complete within-year comparisons between diagnostic assessments and the actual FCAT is by utilizing a level-based comparisons. The diagnostic assessments provide an IRT score, which is not directly comparable to FCAT developmental scale scores, such that both must be converted to levels for comparison. As such, results must be interpreted with the same caution as discussed for cross-year comparisons using level-based scores. Regardless, of the 2,037 students served in the 2013-2014 program year, the School District of Palm Beach County iLab 21st CCLC program had 978 students in grades 3-5 (i.e., those grades where students take the FCAT and, therefore, would have scores for within-year comparisons). Of these students, the program provided both predicted FCAT scores and actual FCAT scores on 978 students (95.0%) – with only 49 students not included in the score report (due to them not taking the FCAT in 2014).

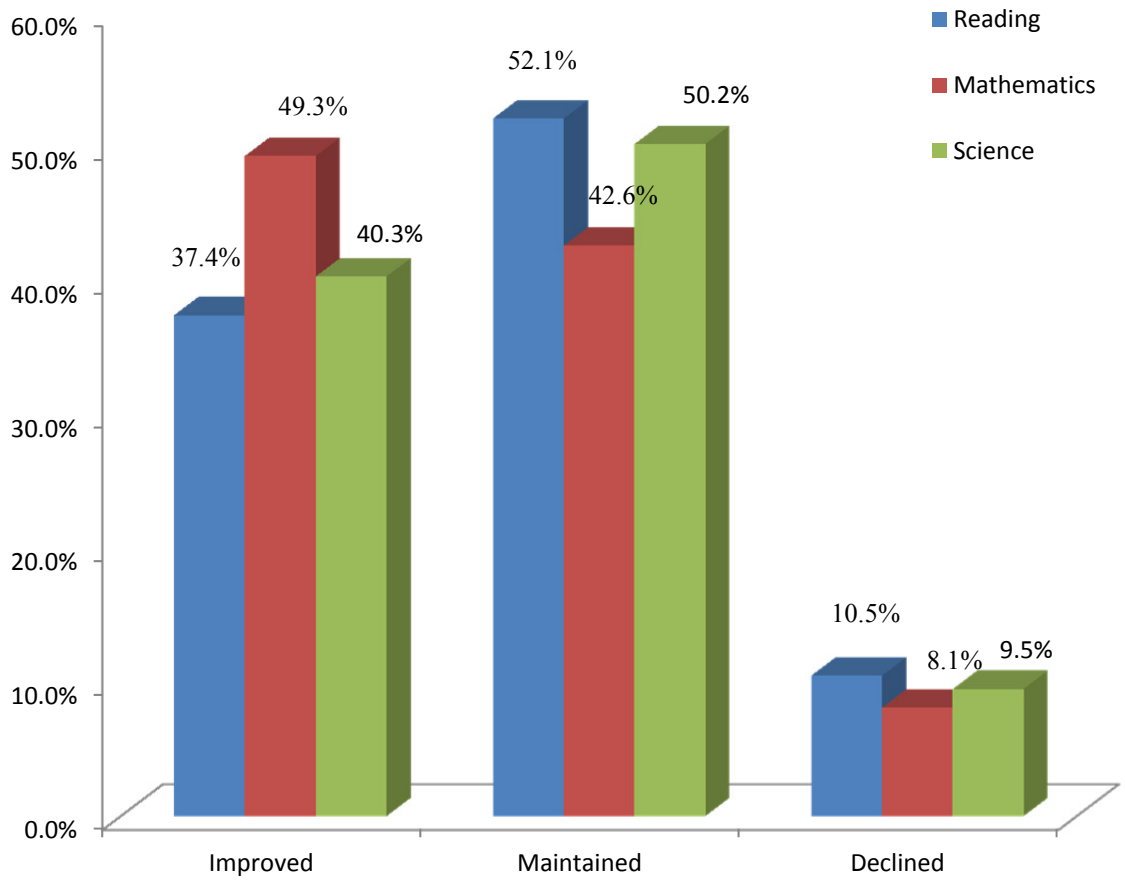
As shown in Table 26 and Figure 7, the majority of students improved or maintained their diagnostic performance when taking the actual FCAT. Table 26 provides two columns for each core subject, the first providing a basic comparison of the diagnostic (predicted FCAT level) to the actual FCAT level – wherein a student would have to increase by a full level to be considered "improved." The second column provides a more appropriate comparison, wherein students would either have to increase by an entire level or maintain a level of proficiency (and thus be considered having achieved grade-level knowledge). More specifically, using the adjusted comparison method, 37.4% of students improved or maintained proficiency in Reading / English Language Arts from the district-provided diagnostic test to the standardized FCAT. In addition, 49.3% of students improved or maintained proficiency in mathematics from the district diagnostic assessment to the actual FCAT administration.

Table 26: Within-Year Comparison: Pred. 2014 FCAT to Actual 2014 FCAT

	Reading FCAT		Mathematics FCAT	
	Level Change (Basic)	*Level Change (Adjusted)*	*Level Change (Basic)*	*Level Change (Adjusted)*
Improved (Proficient)	247 (26.6%)	347 (37.4%)	343 (36.9%)	458 (49.3%)
Maintained	570 (61.4%)	484 (52.1%)	493 (53.1%)	396 (42.6%)
Declined	112 (12.1%)	98 (10.5%)	93 (10%)	75 (8.1%)
TOTAL	929		929	

** The "Basic" level comparison does not consider whether a student was already proficient and maintained proficiency from the diagnostic assessment to the FCAT administration. The "Adjusted" level comparison includes those students that maintained proficiency in the "Improved / Proficient" category, as those students acquired sufficient knowledge to maintain proficiency (with the Diagnostic assessment based on knowledge expectations at the time of the diagnostic – requiring knowledge acquisition to maintain proficiency).*

Figure 7: Within-Year Student Growth: Predicted Level to FCAT Level



In addition to reading and mathematics, one of the key features of the 21st CCLC STEM iLab project is science and engineering. While engineering is not measured using district or state standardized tests, science is one of the core academic subjects measured by such assessments. As such, the summative evaluation also uses within-year comparison to assess impact on the science knowledge of participating 21st CCLC students. As shown in Table 27 and Figure 7, many of the students participating in the 21st CCLC iLab program demonstrated improvements in their scientific knowledge, as assessed by district and state achievement tests. More specifically, Table 27 provides two methods of comparison: (1) Fall to Winter diagnostic; and (2) diagnostic to actual FCAT levels. The Fall to Winter comparison is perhaps the most useful for the 21st CCLC program, as it uses IRT scores (more powerful and accurate than levels) to demonstrate progress and uses two tests that are more similar (thus enhancing comparability). As shown, the program provided fall and winter diagnostic scores on 721 students, where 70.4% of actively participating 21st CLCC iLab students demonstrated improvement and/or maintained proficiency on district diagnostic science assessments provided in the Fall and Winter of the 2013-2014 academic year. Also shown in Table 27, the program provided diagnostic and 2014 FCAT Science scores on 273 students (noting that only the 287 5th grade students would have been eligible to take the 2014 FCAT Science). Of these, 40.3% of actively participating 21st CCLC iLab students demonstrated level-based growth and/or maintained proficiency from the district diagnostic assessment (predicted FCAT level) to the 2014 FCAT Science (actual FCAT level).

Table 27: Within-Year Comparison: Predicted and Actual FCAT Science

	Fall to Winter Diagnostic		**Diagnostic to 2014 FCAT**	
Science Only	*IRT Score (Basic)*	*IRT Score (Adjusted)*	*Level (Basic)*	*Level (Adjusted)*
Improved (Proficient)	470 (65.2%)	507 (70.3%)	78 (28.6%)	110 (40.3%)
Maintained	4 (0.6%)	4 (0.6%)	165 (60.4%)	137 (50.2%)
Declined	247 (34.3%)	210 (29.1%)	30 (11%)	26 (9.5%)
TOTAL	721		273	

** The "Basic" level comparison does not consider whether a student was already proficient and maintained proficiency from the diagnostic assessment to the FCAT administration. The "Adjusted" level comparison includes those students that maintained proficiency in the "Improved / Proficient" category, as those students acquired sufficient knowledge to maintain proficiency (with the Diagnostic assessment based on knowledge expectations at the time of the diagnostic – requiring knowledge acquisition to maintain proficiency).*

OBJECTIVE PROGRESS: DISTRICT METRICS

The School District of Palm Beach County has a substantial amount of academic progress data on every student participating in the 21st CCLC program. The program has electronic literacy records on every student, which includes the following scores: oral language; early literacy; letter recognition upper level; letter recognition lower level; secondary recognition; phonic blending; phonic segment; high frequency words; phonemic assessment; word writing; story retelling; and independent retelling. The District also collects "running reading records" on every student, which provides an indication of a student's reading progress throughout the year. Overall, these are outstanding measures to establish baselines, determining the level of students, and designing specific and individualized interventions under differentiated instruction. For the purposes of the 21st CCLC STEM iLab program, these metrics are not ideal for showing impact specific to the 21st CLCC program and/or the provided activities and services. The School District of Palm Beach County is encouraged to remove these assessments from consideration as metrics for the 21st CCLC iLab Project, or determine how these assessments can be better utilized for establishing the impact of the 21st CCLC project (which may require additional administrations of these tests).

OBJECTIVE PROGRESS: GRADES

The Government Performance and Results Act (GPRA) of 1993 was passed to help increase accountability of federal programs and ensure the highest performing and successful programs are continued, while lower performing programs are discontinued. Given the requirement to develop uniform performance measures for each federal program, the US Department of Education (USED) identified a series of specific indicators for the 21st CCLC program. In addition to performance on standardized tests, the USED chose improvement in grades in core academic subjects as one of the primary GPRA indicators for 21st CCLC.

The US Department of Education (through the Profile and Performance Information Collection System) requires all 21st CCLC programs to report any substantial changes in reading/language arts and mathematics grades for regularly participating 21st CCLC students (those attending the program for at least 30 days). To report on changes in grade performance for regular attendees, programs are instructed to compare the students' first set of fall reading/language arts and math grades with the students' last set of spring grades for those participants who were regular attendees during the reporting period. If the grades for a given student did not span the course

of the entire school year (e.g., the student was only enrolled in math or reading/language arts for one semester), programs are instructed to not report grade results for the student in question. There are some instances where a program may have either reading/language arts or math grades for comparison, but not both. In such a case, the program is instructed to report the change in student performance only for the grades available.

In determining which regularly participating 21st CCLC students changed in terms of course grades, the US Department of Education requires the threshold for change to be one-half letter grade (e.g., B- to B, B to B+, etc.). For each of the subject areas, programs reported the number of students that stayed the same (i.e., did not increase or decrease), the number that improved by half a grade or more, and the number that decreased by half a grade or more between Fall and Spring. For those students that did not change, programs were provided the ability to indicate the number of such students that were already at the highest grade (e.g., "A") and, therefore, unable to improve. If using a 100-point scale, programs were instructed that a half-grade change is a decrease or increase of 5 points. If using an A–F scale, a half-grade change was described as any decrease or increase in the letter grade (e.g., for example, A to A- is a decrease and C+ to B- is an increase). If using an E-S-U (Excellent-Satisfactory-Unsatisfactory) or similar non-A–F letter-grade scale, a half-grade change is defined as a decrease or increase from one letter grade to another.

However, there is a negative bias within the method used by PPICS in determining student improvement in academic achievement. Namely, grade maintenance should not be considered a negative indicator, as a student performing at an "A" level at the beginning of the year and maintaining that "B" level at the end of the year suggests that the student has actually learned substantial information to remain at the "above average" level of performance (rather than decreasing in performance over the course of the year). The purpose of the objectives proposed by the 21st CCLC program is to demonstrate improvement in knowledge, not simple improvement in grades. Therefore, for the purposes of evaluation, it is more appropriate to compare grades to determine whether there was knowledge growth among participating students. More specifically, student growth and academic development should be categorized into three categories: (1) Improved: this includes those students who increased at least ½ letter grade or those who maintained an "above average" grade from the first Fall semester to the most recent semester (including A to B); (2) Maintained: this includes those students who maintained their grade across the semester grades available (C to C, D to D, F to F); and (3) Declined: this includes those students whose course grade dropped during the course of the semesters graded to date (A to C, C to D, etc.).

Although the US Department of Education selected course grades as a federal GPRA indicator, there are no allowances for schools or districts that do not utilize the standard grading system. In terms of the 21st CCLC iLab project, the School District of Palm Beach County operates on a three-semester (trimester) schedule, such that first semester grades would be compared to third semester grades. Unfortunately, due to the unique nature of grades for elementary school students in Palm Beach County, students do not actually have traditional grade data for the 2013-2014 program year. The District was certainly willing to provide grade data, with the District Research and Evaluation Department providing direct assistance in this regard. However, elementary school students receive standards-based report cards that simply show whether they have achieved the various standards for their grade level. The system was not designed nor intended to allow for comparison across semesters, as the goal is to get all students meeting the state-defined standards (not necessarily to show progression of knowledge in a specific subject – often the goal for middle and high school students).

The external evaluator, the SDPBC 21st CCLC Leadership Team, and the District Research and Evaluation Department worked on a method for determining the best method for comparing student grades across the year. Ultimately, the current grading system for elementary schools in Palm Beach County does not provide course grades (as requested by PPICS), nor does it provide a method for grading students consistent with any PPICS method. Indeed, the current standards-based report card used by the SDPBC for elementary school students provides three 'codes' that, together, are designed to show student performance: (1) The Performance Code (Exemplary, Proficient, Approaching, Needs Development); (2) the Access Point (Independent, Supported, Participatory); and the Standards Code (X, #, 0). For non-academic subjects, students are simply graded with an "X" or a "#" to show, respectively, acceptable or area of concern. For the purposes of 21st CCLC, and given the complications of this new grading system, the program may consider removing grades as an indicator of progress for future years. These remain as metrics for the second year, despite these challenges, as the District may develop a method for collecting and comparing student scores in the coming year.

Objective Progress: Pre-Post Assessments

The School District of Palm Beach County 21st CCLC STEM iLab Program proposed to collect data using teacher-created and/or curriculum-based pre-post assessments

within two primary categories: (1) understanding and application of scientific principles; and (2) understanding and interest in the STEM fields of science and engineering. These pre -post assessments were to be given at least quarterly during the grant project year, as proposed in the grant application. While the concept of quarterly assessment was intended to provide the minimum data necessary for continuous improvement processes, the program teachers worked with the evaluator and the Department of Elementary Science within the SDPBC to develop multiple pre-post assessments for each of the iLab units and the Lego WeDo component (with the latter having only one pre-post assessment, as it was implemented as engineering engagement activities and warm-up activities throughout the year, rather than a confined unit conducive to pre-post testing). Regardless, the program gave a total of 16 pre-post assessments: 10 for students in grades K-2 and 10 for students in grades 3-5 (with four pre-post tests used for both grade groupings). Each pre-post-assessment series was focused on a specific concept or component from the EiE or Lego WeDo curriculum, with most items coming from assessments integrated into the overall research-based curriculum units.

Such pre-post assessments allow the program to "showcase" accomplishments and strengths with specific impact and outcome data to share with stakeholders and potential partners. In addition, these pre-post assessments are generally more powerful than grades and FCAT scores in determining the impact of specific components of the 21st CCLC program, as they are administered specific to the activities and lessons being provided within the program. Hence, the assessments are less confounded with other extraneous variables (e.g., other school lessons, changing expectations of school day teachers, etc.) and often provide more interesting data and results. It is important to note that, following an on-site evaluation visit, the program worked with the evaluator to create shorter version of the pre-post assessments – as the original assessments were taking nearly 30 minutes to complete. Given that students only receive a limited amount of iLab programming, it was counterproductive to give pre-post assessments taking that much of the learning time. As such, the pre-post assessments were modified to take approximately 5 minutes and were created such that they could become learning tools after completion.

The program has developed and is utilizing an outstanding database for recording and analyzing pre-post assessment information. Ideally, the program will incorporate findings from these pre-post assessments in designing the program for the next program year. Indeed, program refinement and professional training needs should be generated from data-driven indications of student and program progress. The program

is encouraged to ensure all objectives are assessed with pre-post assessments, where proposed (e.g., mathematics were not assessed with pre-post assessments). Regardless, the results of the pre-post assessments providing during the 2013-2014 program year were impressive, with the vast majority of actively participating 21st CCLC students receiving the majority of pre-post assessments. It is noted that not all students took the pre-post assessments, as students may have left school before completing the post-test, refused to complete either the pre- or post-assessment, or arrived to school after the pre-test had been administered and too close to when the post-test was to be administered. Overall, it appears the program provided the pre-post assessment series to all students possible. Table 28 shows the progress of student understanding and interest in the STEM fields of science and engineering, while Table 29 shows the progress of student understanding and application of scientific principles covered during the 21st CCLC iLab project.

Table 28: Student Understanding and Interest in STEM Fields (Pre-Post)

	Student Base*	Students with Pre-Post (% Total)**	Improved / Maximum	Maintained	Declined
Engineering	All	1783 (89.9%)	1550 (86.9%)	65 (3.6%)	168 (9.4%)
Engineering Design Process	All	1780 (89.7%)	1346 (75.6%)	328 (18.4%)	106 (6%)
Mechanical Engineer	K-2	933 (90.6%)	728 (78.0%)	93 (10.0%)	112 (12.0%)
Materials Engineer	K-2	939 (91.2%)	776 (82.6%)	73 (7.8%)	90 (9.6%)
Aerospace Engineer	3-5	850 (89.1%)	709 (83.4%)	57 (6.7%)	84 (9.9%)
Electrical Engineer	3-5	804 (84.3%)	731 (90.9%)	47 (5.8%)	26 (3.2%)
TOTALS	Max: 2,037		**82.9%**	8.7%	8.3%

** The "student base" indicates the number of students that could have completed the indicated pre-post assessment. Not all assessments were created for all grades, as the grades completed different EiE projects. The percentage improved, maintained, or declined are based only on those students completing both the pre-test and associated post-test. Any student completed one or neither test for each category are excluded.*

*** "% Total" is based on the number of students on whom pre-post assessments were provided divided by the total number of students in the indicated grade levels. For this 21st CCLC iLab program, there were 1,984 students with pre-post assessment data – of whom, 1,030 were in grades K-2 and 954 were in grades 3-5. No pre-post data were provided on 47 students, and these are not included in any statistic.*

Data outlined in Table 28 and Table 29 indicate the 21st CCLC STEM iLab program had strong success in helping students increase their understandings, application, and interest in science and engineering – the primary purpose of this 21st CCLC project. The specific findings are outlined in the determination sub-section at the end of this section of the summative report. Overall, however, two primary findings can be gathered from these tables and the associated pre-post assessments: (1) across all pre-post assessments, 85.7% of all 21st CCLC iLab students demonstrated an improved understanding and application of scientific principles during the course of the 2013-2014 academic year, and (2) across all pre-post assessments, 82.9% of all 21st CCLC iLab students demonstrated improved interest and understanding in science and engineering during the course of the 2013-2014 academic year. Ultimately, the results are overwhelming positive and suggest the program fully met the objectives associated with science and engineering.

Table 29: Student Understanding and Application of Science (Pre-Post)

	Student Base*	Students with Pre-Post (% Total)**	Improved / Maximum	Maintained	Declined
Technology	All	1794 (90.4%)	1670 (93.1%)	45 (2.5%)	79 (4.4%)
Legos WeDo	All	1710 (86.2%)	1549 (90.6%)	129 (7.5%)	32 (1.9%)
Wind Energy	K-2	930 (90.3%)	745 (80.1%)	92 (9.9%)	93 (10%)
Machines and Energy	K-2	936 (90.9%)	836 (89.3%)	36 (3.8%)	64 (6.8%)
Material Properties / Uses	K-2	939 (91.2%)	771 (82.1%)	69 (7.3%)	99 (10.5%)
Properties / Uses: Earth Mat.	K-2	935 (90.8%)	781 (83.5%)	86 (9.2%)	68 (7.3%)
Features of a Spacecraft	3-5	851 (89.2%)	614 (72.2%)	178 (20.9%)	59 (6.9%)
Parachute Characteristics	3-5	852 (89.3%)	761 (89.3%)	59 (6.9%)	32 (3.8%)
Energy Transformation	3-5	795 (83.3%)	742 (93.3%)	36 (4.5%)	17 (2.1%)
Circuits and Diagrams	3-5	798 (83.6%)	665 (83.3%)	78 (9.8%)	55 (6.9%)
TOTALS	Max: 2,037		**85.7%**	8.2%	6.1%

** See notes under Table 28. Although different categories, the notes for Table 28 also apply to this table.*

OBJECTIVE PROGRESS: SCIENCE PORTFOLIO / STEM JOURNAL

In addition to pre-post assessments, the program originally proposed to collect data on student progress using Science Portfolios (STEM Journals). This metric was removed within the first program amendment during the 2013-2014 program year, but still serves as a method for continuous improvement within the program sites. Given the sheer number of students and their varying degree of progress within the iLab units, it became impossible to assess these portfolios with a reliable rubric that would provide useful data across the program. However, teachers are maintaining these portfolios and they are used each day the students come to the iLab program. As witnessed by the evaluator, the students automatically retrieved their portfolio or eagerly volunteered to hand out the portfolios to the class. The portfolios contain all necessary documentation to show what the students are doing within the 21st CCLC STEM iLab program, including writing samples, notes on the scientific process, engineering ideas, and pieces of larger projects. The program is encouraged to develop a method to ensure these portfolios are continuously assessed to ensure all students are progressing in the knowledge and understanding provided through the iLab and EiE units. Data do not need to be stored in a database, as there need not be a rubric for scoring portfolios. However, the teachers should be able to describe how they personally use the portfolios for differentiated instruction or data-driven decision making in relation to the 21st CCLC STEM iLab program implementation.

OBJECTIVE PROGRESS: TEACHER SURVEYS

During the 2013-2014 program year, Florida's 21st CCLC programs were required to provide teacher observational data showing impact of the afterschool program on regularly participating 21st CCLC students (as defined by attending at least 30 days during the program year). Given the unique position of out-of-school programs, teacher surveys are particularly useful to collect information about changes in each individual student's behavior during the program year. However, for the STEM iLab program, the 21st CCLC services were integrated into the school day and the original proposal proposed to collect teacher survey data from all students, not only those attending 30 or more day. Note that the program only proposed to offer services for approximately 18 days per student, such that a low proportion of students would be considered 'regularly participating' by the US Department of Education. It is also important to underscore that the 30-day threshold established by the US Department of Education is not research-based and has never been shown to be a true threshold

differentiating programs that have impact on student academic achievement. Regardless, the teacher surveys are presented in terms of both the US Department of Education 'regular participant' category and all students enrolled in the program. The use of the 'regular participant' differentiation is provided for the purposes of entering data into the Profile and Performance Information Collection System (PPICS) of the US Department of Education and to assist the FLDOE in certifying PPICS data.

As required, surveys were distributed to school-day teachers for each student attending the 21st CCLC STEM iLab program during the course of the year, wherein teachers were asked to indicate the extent to which student behaviors improved or did not improve across the entire academic year. All 21st CCLC sites were instructed to distribute the surveys to school-day teachers who have regular contact with the student. Although it was preferred to survey teachers who were not serving as the 21st CCLC iLab teacher, the US Department of Education stated it was permissible and the School District of Palm Beach County used the iLab teachers to complete the teacher surveys of student impact.

Across Florida, during the prior program year, a total of 31,485 surveys were distributed to teachers in Florida, representing 84.31% of the 37,346 regularly participating 21st CCLC students. Of the 31,485 surveys distributed, 18,106 surveys were returned to the Florida Department of Education (57.5%) and 21,693 were entered into the Profile and Performance Information Collection System (PPICS; 68.9%). Surveys entered directly into PPICS are not analyzed, as they were not entered individually by student and do not contain the same number of questions as the Teacher Survey used by Florida. Regardless, the response rate was significantly lower than the national average response rate of 77.53%. That said, it is important to note that only 16.6% (1,445) of all national centers reported teacher survey data, whereas 97.7% (297) of Florida's 21st CCLC programs reported such data.

As mentioned, teachers were asked to rate the degree of improvement in academic behaviors exhibited by regular program participants across the program year. Table 30 presents the results of the teacher surveys for all Florida students, based on the percentage of students that improved, did not improve, or declined on the specified indicators. It should be noted that the US Department of Education added an additional category of "did not need to improve" to account for the potential "ceiling effect" of students already doing well in the specific behavior and, thus, not improving. The behavioral categories are as follows:

Behavior Code	Category of Behavioral Change
CAW	Increasing effort towards completing assigned work
PIC	Participating in class
VOL	Volunteering (e.g. for extra credit or more responsibilities)
ATT	Attending class regularly
BAC	Being attentive in class
BEH	Behaving in class
ACP	Academic performance
ALN	Getting along well with other students

Table 30: Teacher Survey of 21st CCLC Impacts (Florida)

	Improvement		No Change		Decline	
Code	#	%	#	%	#	%
CAW	13117	79.03%	2577	15.53%	904	5.45%
PIC	13183	78.43%	2731	16.25%	895	5.32%
VOL	10698	67.16%	4817	30.24%	414	2.6%
ATT	8047	68.77%	3023	25.84%	631	5.39%
BAC	12163	75.5%	2871	17.82%	1075	6.67%
BEH	10857	72.13%	2981	19.8%	1214	8.07%
ACP	13832	80.26%	2492	14.46%	909	5.27%
ALN	10762	73.39%	3027	20.64%	875	5.97%

Note: Percentage is based on total number of teacher surveys that were returned. There were 21,693 teacher surveys returned For Florida.

The School District of Palm Beach County 21st CCLC STEM iLab program was successful in obtaining a large number of completed 21st CCLC teacher surveys. Indeed, the program obtained 1,968 completed teacher surveys, of which 1,060 were provided on 'regularly participating' students (defined by the US Department of Education as attending at least 30 days of services). This is equivalent to 96.6% of all 2,037 participating 21st CCLC students, and 99.1% of the 1,070 'regularly participating' students. In general, a 25% response rate is acceptable for drawing conclusions as to whether the surveys demonstrate change in students and/or families, and the 21st CCLC STEM iLab Program far surpassed this threshold.

Results from the administration of the Teacher Survey to teachers of all students participating 21st CCLC students in the SDPBC iLab 21st CCLC program are

presented in Table 31. As shown, the teachers of 21st CCLC students reported a very high proportion of 21st CCLC students as improving in all categories – all of which are higher than results from all Florida 21st CCLC programs combined. Overall, results suggest a very positive and significant impact of the 21st CCLC program on the majority of 21st CCLC students. Table 32 provides information on only those students identified as 'regularly participating' under the US Department of Education definition. As shown, the proportion of students indicated as improving was similar to that of all students in the program. The most applicable results are from all students (rather than only those attending at least 30 days of 21st CCLC programming).

Table 31: Teacher Survey of 21st CCLC Impacts (All Students)

Code	Did not Need to Improve	*Needed to Improve*			
		N	Improved	No Change	Declined
CAW	20 (1.0%)	1,948	1766 (90.7%)	159 (8.2%)	23 (1.2%)
PIC	99 (5.0%)	1,869	1690 (90.4%)	143 (7.7%)	36 (1.9%)
VOL	149 (7.6%)	1,819	1582 (87%)	225 (12.4%)	11 (0.6%)
ATT	1546 (78.6%)	421	250 (59.4%)	140 (33.3%)	31 (7.4%)
BAC	103 (5.2%)	1,865	1701 (91.2%)	132 (7.1%)	32 (1.7%)
BEH	308 (15.7%)	1,660	1485 (89.5%)	141 (8.5%)	34 (2.0%)
ACP	24 (1.2%)	1,943	1787 (92.0%)	143 (7.4%)	13 (0.7%)
ALN	1096 (55.7%)	872	671 (76.9%)	168 (19.3%)	33 (3.8%)

Note: Percentage of "Did not need to improve" is based on all teacher surveys returned on regularly participating students. Percentages for "improved", "no change" and "declined" are based on the total of students needing to improve, and does not include those students that did not need to improve.

The following represent some important findings from the Teacher Survey:

- 90.7% of participating students were reported by teachers to have improved in their efforts towards completing assigned work.
- 90.4% of participating students were reported by teachers to have improved in their participation in class over the course of the 2013-2014 academic year.
- 87% of participating students were reported by teachers to have increased their level of volunteering during the 2013-2014 academic year.

- 59.4% of participating students were reported by teachers to have improved in attending classes more regularly.
- 91.2% of participating students were reported by teachers to have been more attentive in class over the course of the program year.
- 89.5% of participating students were reported by teachers to have improved in overall behaviors during classes over the course of the academic year.
- 92% of participating students were reported by teachers to have improved in their overall academic performance during school.
- 76.9% of participating students were reported by teachers to have improved in their abilities to get along well with other students during the school day.

Table 32: Teacher Survey of 21st CCLC Impacts (Students with 30+ Days)

Code	Did not Need to Improve	*Needed to Improve*			
		N	Improved	No Change	Declined
CAW	18 (1.7%)	1,042	899 (86.3%)	132 (12.7%)	11 (1.1%)
PIC	42 (4.0%)	1,018	880 (86.4%)	127 (12.5%)	11 (1.1%)
VOL	67 (6.3%)	993	851 (85.7%)	135 (13.6%)	6 (0.6%)
ATT	736 (69.5%)	323	204 (63.2%)	114 (35.3%)	5 (1.5%)
BAC	40 (3.8%)	1,020	894 (87.6%)	114 (11.2%)	12 (1.2%)
BEH	93 (8.8%)	967	842 (87.1%)	116 (12.0%)	9 (0.9%)
ACP	6 (0.6%)	1,053	928 (88.1%)	121 (11.5%)	4 (0.4%)
ALN	550 (51.9%)	510	357 (70.0%)	143 (28.0%)	10 (2.0%)

Note: Percentage of "Did not need to improve" is based on all teacher surveys returned on regularly participating students. Percentages for "improved", "no change" and "declined" are based on the total of students needing to improve, and does not include those students that did not need to improve.

In addition to the federal teacher survey, those teachers completing the 21st CCLC teacher survey were also asked whether they felt each individual student benefited from participating in the 21st CCLC Extended Learning Time (ELT) program. A total of 1967 surveys were returned with this question answered - 96.6% of the 2037 students enrolled in the program. Overall, the responses were positive, with 37.2% of teachers stating the students 'absolutely' benefited from the 21st CCLC program, 42.3% stating students 'mostly' benefited from the program, and 15.8% stating

students 'somewhat' benefited from the program. This suggests that 95.2% of teachers indicated the 21st CCLC STEM iLab program had overall positive benefits for students participating in the EiE, Lego Robotics, and other iLab activities.

OBJECTIVE PROGRESS: STAKEHOLDER SURVEYS

In addition to teacher surveys, the program proposed to collect student surveys at least twice per year as part of the continuous improvement process. These surveys were not available for the summative evaluation, as the program had not provided student surveys during the 2013-2014 program year secondary to some miscommunication between the district elementary science department and the 21st CCLC iLab teachers. In future years, the program is encouraged to provide these surveys at the end of November and then at the end of the academic program year. Although the state provides student surveys, the program is encouraged to look at the language of the approved objectives and ensure the state surveys address all parts of the objectives (or create separate surveys). Such a multi-point collection process will help the program make changes based on the surveys, thus helping to improve satisfaction and overall participation in the program. All data from surveys must be transferred to an electronic database and connected to the student number to allow for analysis, evaluation, and entry into the US Dept. of Ed. Profile and Performance Information Collection System (PPICS). The following provides the general items that should be addressed within the student survey: (1) improvement in understanding and application of scientific principles; (2) increased understanding and interest in STEM field (Science / Engineering); and (3) increased dedication, motivation, and commitment to educational process.

OBJECTIVE PROGRESS: BEHAVIOR / ATTENDANCE

The School District of Palm Beach County 21st CCLC Investigation Lab program originally proposed to collect data on in-school behaviors (e.g., suspensions and referrals) and student rates of attendance and tardiness to show changes in student dedication, motivation, and commitment to the educational process. During the formative evaluation, the program was alerted to some inherent issues with the in-school behavioral and attendance data on the students in these schools. These issues are not unique to the elementary schools across Florida, but were important to consider prior to the program relying on these factors to show progress of the 21st CCLC student participants. The figures below are based on data provided by the

School District of Palm Beach County on the students participating in the 21st CCLC Investigation Lab Program through the 2013-2014 program year. As shown, there is a distinct floor effect with most of these variables, such that the majority of students do not have baseline behavioral issues or significant attendance issues. With such figures, it is unlikely that any progress could be shown for 21st CCLC students using these metrics. The program was encouraged to remove these metrics from the approved grant objectives, as they would not produce meaningful results. As such, the program removed these indicators for further consideration. However, they are presented here only insofar as to explain why they will no longer be included in the evaluation process in future years of program operation.

- Out Of School Suspension (OSS):
  - Number of Students with 1+ Days OSS: 186 (9.1% of 2,037 Students)
  - Number of Students with >5 Days OSS: 7 (0.3% of 2,037 Students)
- In School Suspension (ISS):
  - Number of Students with 1+ Days ISS: 30 (1.5% of 2,037 Students)
  - Number of Students with >5 Days ISS: 0 (0.0% of 2,037 Students)
- Student Absence / Tardiness:
  - Number with >0 Absence: 1,626 (79.8% of All Students)
  - Number with >5 Absence: 734 (36.0% of All Students)
  - Number with >21 Absences: 52 (2.6% of All Students)
- Student Retentions:
  - Number with 1+ Retentions: 306 (15.0% of All Students)
  - Number with 2+ Retentions: 34 (1.7% of All Students)
  - Number with 3+ Retentions: 0 (0.0% of All Students)

PROGRESS TOWARDS OBJECTIVES: DETERMINATION

The United States Department of Education (USED) requires all 21st CCLC programs to indicate progress towards attaining each of the individualized objectives. In order to assess objective progress, the USED requires each objective to be rated in the Profile and Performance Information Collection System (PPICS) within one of the following objective categories.

Met =	Met the stated objective
Progress =	Did not meet but progressed toward objective
No Progress =	Did not meet and no progress made
Unable to Assess =	Unable to measure progress on the stated objective
Revised =	Revised the stated objective
Dropped =	Dropped the stated objective entirely
Not Associated =	Objective not associated with the reporting period

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Objective 1.1

Objective: 85% of actively participating 21st CCLC iLab students will demonstrate improved understanding and application of scientific principles consistent with Florida's Next Generation Sunshine State Standards.

Data Type / Frequency: Data for this objective were proposed to include the following metrics: pre-post assessments (***unit-based, 10 pre-post assessments per year per student***), standardized test scores (***FCAT once annually, Diagnostics twice annually – three assessments per year***), school grades (***trimesters),*** and/or student surveys (***bi-annual***). Measures used were consistent with the evaluation plan detailed in the approved grant application (Amendment 1).

How Data Were Analyzed: This objective is based on simple "improvement," such that each student is compared to their own baseline data for each of the associated metrics. Such within-subjects analysis is achieved by calculating whether each student increased, maintained, or declined in each of the metrics, then calculating the percent of all students with data that demonstrated improvement and/or maintenance. It is important to note that the objective was not proposed to have a "significant increase" in student performance, such that traditional statistical methods are not necessary nor warranted. In addition, there is little control over extraneous variables with regards to the metrics used under this objective, such that a significant amount of Type I Error and potential violations to statistical assumptions limit the usefulness of 'traditional statistical methods' in the analysis of this objective.

Progress Towards Objective: Met the Stated Objective

- 72.9% of students improved or maintained science performance from the Fall to Winter standardized diagnostic assessment.
- 70.4% of actively participating 21st CLCC iLab students demonstrated improvement and/or maintained proficiency on district diagnostic science assessments provided in the Fall and Winter of the 2013-2014 academic year.
- 40.3% of actively participating 21st CCLC iLab students demonstrated level-based growth and/or maintained proficiency from the district diagnostic assessment (predicted level) to the 2014 FCAT Science (actual level).
- Across all pre-post assessments, 85.7% of all 21st CCLC iLab students demonstrated an improved understanding and application of scientific principles during the course of the 2013-2014 academic year.
- 93.1% of actively participating 21st CCLC STEM Investigation Lab students improved their knowledge of technology, as measured by pre-post assessments.
- 80.1% of actively participating 21st CCLC STEM Investigation Lab students in grades K-2 improved their understanding of the scientific principles of wind energy, as measured by pre-post assessments.
- 89.3% of actively participating 21st CCLC STEM Investigation Lab students in grades K-2 improved their understanding of the scientific principles of machines and energy, as measured by pre-post assessments.
- 82.1% of actively participating 21st CCLC STEM Investigation Lab students in grades K-2 improved their understanding and application of scientific material, as measured by pre-post assessments.
- 83.5% of actively participating 21st CCLC STEM Investigation Lab students in grades K-2 improved their understanding and application of earth materials, as measured by pre-post assessments.
- 90.6% of all actively participating 21st CCLC STEM Investigation Lab students demonstrated improved application of technology and physics through the Lego WeDo curriculum, as measured by pre-post assessments.
- 72.2% of actively participating 21st CCLC STEM Investigation Lab students in grades 3-5 improved their understanding of scientific principles and features of a spacecraft, as measured by pre-post assessments.

- 89.3% of actively participating 21st CCLC STEM Investigation Lab students in grades 3-5 improved their understanding of the scientific principles and characteristics of a parachute, as measured by pre-post assessments.
- 93.3% of actively participating 21st CCLC STEM Investigation Lab students in grades 3-5 improved their understanding and application of energy transformation, as measured by pre-post assessments.
- 83.3% of actively participating 21st CCLC STEM Investigation Lab students in grades K-2 improved their understanding and application of circuits and diagrams, as measured by pre-post assessments.

Recommendations: The program has focused most project plans on science and engineering topics, as these present the greatest level of interest with participating 21st CCLC students. These project plans provide creative and hands-on application of scientific knowledge and reinforce concepts from the regular school day. Overall, the projects and EiE curriculum are being implemented as planned and proposed. The program is encouraged to ensure the student surveys are collected for this objective in the second year of operations. The program is encouraged to remove grades as a metric for this objective, as the current system of grading students does not provide data sufficient for analysis.

Objective 1.2

Objective: 80% of actively participating 21st CCLC iLab students will demonstrate improved knowledge, skills, & abilities in mathematics consistent with Common Core Standards

Data Type / Frequency: Data for this objective were proposed to include the following metrics: pre-post assessments (***unit-based, at least quarterly***), standardized test scores (***FCAT once annually, Diagnostics twice annually – three assessments per year***), and/or school grades (***trimesters).*** The program collected sufficient data from standardized test scores, including district diagnostics and FCAT scores from the prior year and current year. However, the district was not able to provide grades for students, as the current standards-based reporting system does not provide sufficient data for analysis. The program also did not collect pre-post assessments for mathematics, though provided a substantial number for science. Unfortunately, without school grades, the program

is left with only FCAT to show progress towards this objective, which is difficult given the properties of such achievement tests.

How Data Were Analyzed: As with all objectives, this objective is an "improvement" objective, such that each student is compared to their own baseline data for most of the associated metrics. Such within-subjects analysis is achieved by calculating whether each student increased, maintained, or declined in each of the metrics and then calculating the percent of all students with data that demonstrated improvement.

Progress Towards Objective: Did Not Meet, But Progressed Towards Objective

- 73.3% of students improved or maintained academic performance on the standardized mathematics diagnostic assessment from Fall to Winter.
- 72.6% of actively participating 21st CCLC iLab students demonstrated improved FCAT Mathematics Developmental Scale Scores from the 2013 FCAT to 2014 FCAT.
- 71.5% of students demonstrated improved or maintained predicted level growth in FCAT Mathematics from the prior year to the Fall Diagnostic.
- 49.3% of students improved or maintained proficiency in mathematics from the district diagnostic assessment to the actual FCAT administration.
- 40.0% of students demonstrated level-based growth in FCAT Mathematics from the 2013 FCAT to the 2014 FCAT, where level-based growth includes those students increasing from below proficient to proficient and/or maintaining proficiency.

Recommendations: The program has implemented several project plans that provide creative, hands-on, and fun application of knowledge to teach and/or reinforce mathematics concepts. However, while the primary indicators for this objective are district and state standardized assessment scores, there have been some challenges for using other metrics proposed with this objective (e.g., no course mathematics grades). The program is encouraged to determine the most appropriate and accessible metrics that allow the demonstration of within-year progress towards this objective. In addition, pre-post assessments could help provide necessary data, but were not collected by the program. These assessments should be collected in the next year of program operations, with pre-post assessments provided at least one per quarter.

Objective 1.3

Objective: 80% of actively participating 21st CCLC iLab students will demonstrate increased reading proficiency.

Data Type / Frequency: Data for this objective were proposed to include the following metrics: standardized test scores (***FCAT once annually, Diagnostics twice annually – three assessments per year***), school grades (***trimesters)***, and/or district assessments ***(Annual).*** The program collected sufficient data from standardized test scores, including district diagnostics and FCAT scores from the prior year and current year. However, the district was not able to provide grades for students, as the current standards-based reporting system does not provide sufficient data for analysis. The program also did not collect multi-point data using district assessments (the running reading records provided were single-point assessments, though students are supposed to be assessed several times per year). Unfortunately, without school grades or other district assessments, the program is left with only FCAT to show progress towards this objective, which is difficult given the properties of such achievement tests.

How Data Were Analyzed: As with all objectives, this objective is an "improvement" objective, such that each student is compared to their own baseline data for most of the associated metrics. Such within-subjects analysis is achieved by calculating whether each student increased, maintained, or declined in each of the metrics and then calculating the percent of all students with data that demonstrated improvement.

Progress Towards Objective: Met the Stated Objective

- 82.0% of students demonstrated improved or maintained level-based growth in FCAT Reading from the prior year to the Fall Diagnostic.
- 75.5% of actively participating 21st CCLC iLab students demonstrated improved FCAT Reading Developmental Scale Scores from the 2013 FCAT to 2014 FCAT.
- 74.9% of students improved or maintained academic performance on the standardized Reading / English Language Arts diagnostic from Fall to Winter.

- 34.7% of students demonstrated level-based growth in FCAT Reading from the prior year to the current year FCAT, where level-based growth includes those students increasing from below proficient to proficient and/or maintaining proficiency across the two years.
- 37.4% of students improved or maintained proficiency in Reading achievement from the district diagnostic test to the standardized FCAT.

Recommendations: The program has implemented a great deal of reading into project-based learning plans. The program's operations and activities are based on highly effective best-practices, and it is unlikely that adding additional reading time or changing from the current project-based, theme-based reading would increase progress towards this objective. Rather, the issue lies with the metrics available to assess progress towards the objective. The primary indicators for this objective are district and state standardized assessment scores. Unfortunately, there are significant challenges for using most other metrics proposed with this objective, and even the FCAT poses challenges as not all students take the FCAT (i.e., K-2). The challenges discussed above limit the usefulness of most metrics, such that the program should reconsider whether such data are appropriate for inclusion as measures towards progress for this objective. The District already collects other data that can be useful to assess this objective, and the 21st CCLC program should obtain full access to all data on students participating in the program. The program is encouraged to work with the evaluation department to determine the most appropriate and accessible metrics that allow the demonstration of within-year progress towards this objective.

Objective 1.4

Objective: 90% of actively participating 21st CCLC iLab students will express increased understanding and interest in the STEM fields of science & engineering.

Data Type / Frequency: Data for this objective were proposed to include the following metrics: pre-post assessments (***unit-based***) and/or student interest surveys (***bi-annual***). The program also proposed to maintain student STEM portfolios, which were evidenced during site evaluation visits. These STEM portfolios are not assessed, but are used as demonstration of activities and are used by teachers to guide differentiated instruction with students. In terms of objective data, the program was able to collect a total of 10 sets of pre-post

assessments on each student. The program did not collect student interest inventories, though these would be helpful to further bolster this objective.

How Data Were Analyzed: As with all objectives, this objective is an "improvement" objective, such that each student is compared to their own baseline data for most of the associated metrics. Such within-subjects analysis is achieved by calculating whether each student increased, maintained, or declined in each of the metrics and then calculating the percent of all students with data that demonstrated improvement.

Progress Towards Objective: Did Not Meet, But Progressed Towards Objective

- Across all pre-post assessments, 82.9% of all 21st CCLC iLab students demonstrated improved interest and understanding in science and engineering during the course of the 2013-2014 academic year.
- 90.9% of actively participating 21st CCLC STEM Investigation Lab students in grades 3-5 demonstrated improved understanding of an electrical engineer, as measured by pre-post assessments.
- 86.9% of actively participating 21st CCLC STEM Investigation Lab students improved their understanding of engineering concepts and principles, as measured by pre-post assessments.
- 83.4% of actively participating 21st CCLC STEM Investigation Lab students in grades 3-5 demonstrated improved understanding of an aerospace engineer, as measured by pre-post assessments.
- 82.6% of actively participating 21st CCLC STEM Investigation Lab students in grades K-2 demonstrated improved understanding of a materials engineer, as measured by pre-post assessments.
- 75.6% of actively participating 21st CCLC STEM Investigation Lab students demonstrated improved understanding of the engineering design process (EDP), as measured by pre-post assessments.
- 78% of actively participating 21st CCLC STEM Investigation Lab students in grades K-2 demonstrated improved understanding of a mechanical engineer, as measured by pre-post assessments.

Recommendations: Detailed recommendations are provided under the proposed metrics within this section, and within the recommendations sections located at

the end of the report. In essence, the program is encouraged to collect student interest surveys to help show progress towards this objective. Although the program met the stated objective with pre-post assessments, it would be helpful to have student self-report data to help strengthen the demonstration of progress towards the objective. Given the activities provided under the iLab Project, it is anticipated that the program will have little difficulty continuing to meet this objective in future years.

Objective 1.5

Objective: 80% of actively participating 21st CCLC students will show increased dedication, motivation, and commitment to the educational process.

Data Type / Frequency: Data for this objective were proposed to include the following metrics: teacher surveys on work completion and active participation (***annual***) and/or student surveys (***bi-annual***). The program removed in-school behaviors and attendance/tardy rates through the approved Amendment 1, upon recommendation from the evaluator due to floor effects. The program collected teacher surveys at the end of the year, but did not collect student surveys.

How Data Were Analyzed: As with other objectives, this objective is an "improvement" objective, such that each student is compared to their own baseline data for most of the associated metrics. Such within-subjects analysis is achieved by calculating whether each student increased, maintained, or declined in each of the metrics and then calculating the percent of all students with data that demonstrated improvement.

Progress Towards Objective: Met the Stated Objective

- 92.0% of participating students were reported by teachers to have improved in their overall academic performance during school.
- 91.2% of participating students were reported by teachers to have been more attentive in class over the course of the program year.
- 90.7% of participating students were reported by teachers to have improved in their efforts towards completing assigned work.
- 90.4% of participating students were reported by teachers to have improved in their participation in class over the course of the 2013-2014 academic year.

- 89.5% of participating students were reported by teachers to have improved in overall behaviors during classes over the course of the academic year.
- 87.0% of participating students were reported by teachers to have increased their level of volunteering during the 2013-2014 academic year.
- 76.9% of participating students were reported by teachers to have improved in their abilities to get along well with other students during the school day.
- 59.4% of participating students were reported by teachers to have improved in attending classes more regularly.

Recommendations: Nearly every project-based learning plan and personal enrichment activity includes activities that engage the students in learning and, most importantly, application of that learning. The teachers and administrators have indicated in interviews that students are responding well to the program, showing improved behaviors and increased interest in the regular school day as they look forward to the STEM iLab program. The teacher survey overwhelmingly shows positive impacts of the program. The program is encouraged to ensure all data elements proposed for this objective are collected as proposed (e.g., student surveys), or work with the evaluator to determine which metrics are most appropriate for the overall 21st CCLC program.

Objective 1.6

Objective: 90% of school teachers whose students participate in the 21st CCLC iLab Project will express teacher satisfaction with the 21st CCLC project and a positive impact on their ability to navigate the extended school day.

Data Type / Frequency: Data for this objective were proposed to include the following metrics: teacher surveys (***annual***) and/or teacher interviews (***annual***).

How Data Were Analyzed: This objective is an annual survey objective, such that there is no baseline with which to compare collected data. Upon submission of necessary data to assess this objective at the end of the academic year, the responses of teachers would have been assessed to determine the percentage of teachers indicating the iLab Project helped make a positive impact on their ability to navigate the extended learning day. However, no data were submitted.

Progress Towards Objective: Unable to Measure Progress

Recommendations: Detailed recommendations are provided in the recommendations section of this report. In terms of this objective, the program did not provide necessary data to establish progress. However, in speaking with teachers working in the iLab program, there is general satisfaction with the project-based learning provided under the 21st CCLC program. General suggestions from teachers have been addressed prior to this report, such as providing a more regular schedule for students and ensuring all materials are readily available for the iLab teachers. However, this objective is focused on all teachers in the school, rather than just the four iLab teachers. The program is encouraged to collect the requisite data to establish progress towards this approved 21st CCLC iLab objective.

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Objective Progress: Adult Family Member Services

The third specific purpose of the 21st CCLC initiative is to offer families of actively participating 21st CCLC students the opportunity for literacy and related educational development. As per the requirements of the Request for Proposals under which the iLab 21st CCLC ELT grant was written, all programs are required to provide services designed to increase the involvement of adult family members in their child's education (e.g., family reading nights, student performances/showcases, participation in school-based parent activities that have a documented 21st CCLC focus, etc.) and/or to develop literacy or related educational skills that will enable adult family members to be supportive of the child's learning (e.g., GED preparation, money management, parenting skills, etc.). While programs are provided some flexibility with regards to the level of adult family member services they provide, the program must provide at least monthly activities and/or services, and must provide enough outreach to progress towards the proposed family-based objectives. Many programs in Florida limit adult family member activities to special events (e.g., student plays) and general meetings. Unfortunately, secondary to the difficulty in getting adult family member participation in these services, it is rare for Florida programs to serve a substantial percentage of adult family members.

Need-Based Objectives

The School District of Palm Beach County Investigations Lab 21st CCLC Program developed the following need-based objectives for providing services to adult family members of actively participating 21st CCLC students:

2.1) 70% of adult family members of 21st CCLC iLab students participating in family services will demonstrate increased involvement in their child's education.

2.2) 80% of adult family members of 21st CCLC iLab students participating in 21st CCLC family services will increase exposure and understanding of student educational resources.

ACTIVITIES PROVIDED

In support of the approved needs-based objectives, the School District of Palm Beach County 21st CCLC Investigation Lab proposed several research-based and family-focused activities to help parents and adult family members support the academic achievement of participating 21st CCLC students. The following is taken from the approved application providing details of the adult family member services proposed by the School District of Palm Beach County:

> All four schools in the 21st CCLC iLab project are subject to Title I regulations and requirements for family involvement. Each school must work annually with parents to jointly develop and agree upon the Parent Involvement Plan (PIP) and the School-Parent Compact, to outline how families, school staff, and students will share in the responsibility to improve student achievement. In the PIP, all schools are required to build the capacity of parents to help their children achieve high academic standards. To do this, teachers participate in professional development to improve their ability to work effectively with partners to improve student success, and the schools provide parent trainings and family involvement events throughout the year. Parent training topics vary from school to school, depending upon the jointly developed PIP, but generally include family literacy, technology, math family fun, parenting skills, how-to technology, family game night, homework help, positive behavior at home, and more. Parent Leadership is the focus for PTA/PTO and SAC Meetings. Schools flex the schedule to meet the differing needs of working parents.
>
> Each school has a designated staff member as a Family Involvement Coordinator who coordinates, monitors, and documents the family involvement program, and maintains the Parent Resource Center (PRC) in each school. The PRC is a welcoming place set aside to make the school more accessible to families, to encourage parents to learn about the child's education as well as network with other parents, and to build parent capacity by providing relevant trainings and workshops in flexible schedules. Each PRC has parent materials and resources organized for check-out. Parents receive a welcome letter with a brochure outlining the training and materials available for parents to check-out and the PRC hours of operation. All parent communications are translated into Haitian-Creole, Portuguese, and Spanish. Full time Language Facilitators at each school translate and promote communications in languages that the parents understand.
>
> To overcome barriers to successful family involvement, the schools use strategies that are likely to result in successful recruitment and retention of

adult family members. Each school encourages ongoing two-way communication in a customer-friendly way, greeting parents, taking messages, responding to questions and concerns. Teachers call, write, email, and conference with families throughout the year to share progress or suggestions. The schools provide multiple family opportunities per year and distribute a school calendar with clearly marked dates for family events, report cards, school-wide testing dates, etc. Each school provides a website with updated parent information, and a school newsletter is sent to parents with timely information about meetings and school events. Family events at the school are advertised clearly, attractively, and repeatedly, in a variety of ways including mail, newsletters, e-mail, phone calls, websites, student journals, etc. Invitations are sent prior to each event, with a perforated response for parents to indicate their transportation and child care needs. Written materials are parent-friendly. For the diverse with translations available, and language facilitators attend meetings and trainings and language facilitators in attendance. Welcome signs with directions to event are posted in parents' languages. As needed, parent trainings are held at alternative sites (e.g., Dr. Mary McLeod Bethune Elementary at St. Johns Baptist Church). Child care is offered in a safe room with enriching activities. Parent Liaisons help make connections with families and visit homes, as needed.

Family Objective Progress: Activities Provided

One of the most important metrics regarding services to adult family members is whether such services were actually provided. Programs in Florida are required to provide adult family member activities which are able to serve all parents and family members wishing to attend. As of the summative evaluation, the School District of Palm Beach County 21st CCLC iLab ELT Program provided necessary information to demonstrate that the iLab schools provided workshops and activities for all parents at least monthly. Given that all students in the schools are 21st CCLC students, each activity was open to adult family members of 21st CCLC students. In addition to the school-wide activities and workshops, the 21st CCLC iLab programs also provided several STEM family nights, allowing students to demonstrate their projects and engage parents in the engineering processes they were learning in iLab.

It is important to note that the 21st CCLC program, as approved, did not propose to actually provide any family member services as part of the overall 21st CCLC initiative. Rather, the 21st CCLC program indicated that the school already provides such services and that the school-provided services would be utilized to satisfy the 21st CCLC requirements of adult family member programming. Certainly, the school

has provided these services as part of the overall school model. It also is noted that 21st CCLC funding was not used to support any family member programming, with the schools using coordinated funding to provide such events. The program is highly encouraged to gather and maintain more accurate and streamlined documentation about parent activities where the 21st CCLC program is involved and/or where 21st CCLC parents are served (e.g., fliers, agenda, sign-in sheets). It is also noted that, during interviews with iLab teachers, additional outstanding and creative adult family member activities have been provided and should also be documented (e.g., one school did a parent breakfast with iLab students, where parents were able to see what students were working on within the 21st CCLC iLab program).

FAMILY OBJECTIVE PROGRESS: PACT LOGS

The School District of Palm Beach County 21st CCLC iLab program proposed to collect specific data from adult family members and parents related to development of parenting skills and literacy skills. These data were to be collected through Parent And Child Together (PACT) Time Logs. Unfortunately, although the program has worked hard to encourage and obtain family member participation in the 21st CCLC program, this metric has not been recorded and/or was not provided for the purposes of evaluation. The program is encouraged to implement the logs in the next program year and ensure logs are translated into electronic databases for continuous improvement and evaluation purposes.

FAMILY OBJECTIVE PROGRESS: STAKEHOLDER SURVEYS

The program proposed to collect parent and teacher surveys annually as part of the continuous improvement process to assess progress towards the adult objectives. The program implemented teacher surveys, but they did not assess parent objectives. The program did not collect parent surveys. In future years, the program is encouraged to provide parent and teacher surveys at the end of November and then at the end of the academic program year. Such a process will help the program identify issues and make changes based on the surveys, thus helping to improve satisfaction and overall participation in the program. All data from surveys must be transferred to an electronic database to allow for analysis and evaluation.

PROGRESS TOWARDS OBJECTIVES: DETERMINATION

The United States Department of Education (USED) requires all 21st CCLC programs to indicate progress towards attaining each of the individualized objectives. In order to assess objective progress, the USED requires each objective to be rated in the Profile and Performance Information Collection System (PPICS) within one of the following objective categories.

Met =	Met the stated objective
Progress =	Did not meet but progressed toward objective
No Progress =	Did not meet and no progress made
Unable to Assess =	Unable to measure progress on the stated objective
Revised =	Revised the stated objective
Dropped =	Dropped the stated objective entirely
Not Associated =	Objective not associated with the reporting period

Objective 2.1

Objective: 70% of adult family members of 21st CCLC iLab students participating in family services will demonstrate increased involvement in their child's education.

Data Type / Frequency: Data for this objective were proposed to include the following metrics: Parent And Child Together logs (***quarterly***), parent surveys (***quarterly***), and/or teacher observations (***bi-annual***). The program did not collected necessary data to demonstrate progress towards this objective.

How Data Were Analyzed: No data were provided for analysis.

Progress Towards Objective: Unable to Assess Progress

Recommendations: The schools are providing monthly adult family member programming at all sites, as proposed in the approved grant application. However, based on submitted data, there is no way to determine the percentage of 21st CCLC students with adult family members at the parent programming. The program is encouraged to ensure all sites provide monthly programming and,

most importantly, that there is a method for assessing which 21st CCLC students are represented by their adult family members. The program is also encouraged to collect all proposed data from participating adult family members. Without the proposed data, the program will not be able to demonstrate progress towards this objective within the next program year.

Objective 2.2

Objective: 80% of adult family members of 21st CCLC iLab students participating in 21st CCLC family services will increase exposure and understanding of student educational resources.

Data Type / Frequency: Data for this objective were proposed to include the following metrics: Parent And Child Together logs (***quarterly***), parent surveys (***quarterly***), and/or teacher observations (***bi-annual***). The program did not collected necessary data to demonstrate progress towards this objective.

How Data Were Analyzed: Insufficient data were provided for analysis.

Progress Towards Objective: Unable to Assess Progress

Recommendations: Detailed recommendations are provided at the end of the formative report. However, the program is encouraged to improve the method of assessing parental involvement in the 21st CCLC activities. The program is encouraged to ensure family member attendance is incorporated into the electronic databases, allowing the program to quickly see which students were represented at the family member events and, if necessary, develop refinements for increasing involvement.

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QUALITY IMPROVEMENT ACTIVITIES

Over the course of the 2013-2014 program year, the School District of Palm Beach County 21st CCLC STEM iLab Program worked to make enhancements and improvement to the 21st CCLC program. These enhancements were enacted primarily as a product of the recommendations from the formative evaluation report; meetings with the external evaluator; and internal meetings with 21st CCLC staff, district leadership, and school leadership.

ENSURING GRANT FIDELITY

Fidelity of the proposed grant model is critical to ensure compliance with the approved grant application and the established rules of the Florida Department of Education. It is important that all teachers apply the overall iLab model as best as possible in their schools. While it is not important that every element of the EiE curriculum be implemented (this is not an evaluation of EiE), it is important that the core elements be implemented in a way consistent with the overall research-based curriculum. For instance, if the teacher is building the EiE models for the students, but not giving them a chance to complete the building on their own, then this interferes with the fidelity of the overall project. During the formative evaluation process, the 21st CCLC iLab Program was encouraged to provide additional professional development and/or increased oversight to ensure the fidelity of the core concepts and core components of the proposed grant application and associated activities. Over the second half of the program year, district leadership (i.e., the program directors in the first year) provided substantial support and oversight of the iLab teachers – including additional trainings and in-vivo support (e.g., co-teaching, professional support, and training resources). Ultimately, it appears the fidelity of the proposed 21st CCLC STEM iLab model had been improved by the end of the program year – based on submitted evaluation data and on-site evaluation visits.

KEEPING ONLINE SYSTEM UPDATED

The 21st CCLC program incorporated a number of projects over the course of the academic year, but these were not originally submitted to the online FLDOE system or reviewed by the program evaluator. The program realized the importance of

including all project plans in the upload system for informational purposes and, when necessary, for approval by the Florida Department of Education and review by stakeholders. The external evaluator encouraged the program to consider the online system as a complete repository of general information about the implemented 21st CCLC program, providing a backup of program components that drive funding, expenditures, and actual activities for students and families. In addition to the project plans, it was realized that important other elements of the online system must be maintained with accurate information. When possible, the program was encouraged to keep deliverables separated (e.g., having sign-in sheets from only one training in each upload). The program thus uploaded multiple documents to the system under a single deliverable without issue, which helped keep the program organized and assisted in review of program deliverables. Items appeared incomplete on the online system during the formative evaluation process. Overall, the program developed a new internal procedural system to ensure uploads to the FLDOE online system were organized and complete. The program will be hiring a full-time program director (to work between the two iLab projects), which should further enhance the processes.

Develop Comprehensive Project-Based Learning Plans

At the time of the formative evaluation process, the program had not submitted any project plans to the Florida Department of Education, though did utilize the Engineering is Elementary (EiE) curriculum, which is based on project-based learning. However, not all objectives are addressed and not all activities provided are included within the standard EiE project plans. It was recommended that project plans should last at least 5 weeks and could be written to take place over 9 to 18 weeks (in keeping with the structure of the academic year). Each major project could contain several related projects (e.g., creating a fish, designing coral, creating seaweed) that build to a larger project (e.g., creating a diorama of the ocean). Overall, project plans were needed for all activities, with a sufficient number of projects and/or activities to address all objectives approved within the grant application. The program was encouraged to ensure each teacher or the overall program develops and submits official project plans and/or updates on a monthly basis. The form designed by the FDOE was recommended for use when creating the project plans. The program modified processes and worked to ensure each teacher followed written project plans and ensured the plans were updated on a monthly basis. In general, the form designed by the FDOE was used for creating the project plans.

IMPLEMENT PRE-POST ASSESSMENTS

While the 21st CCLC program had collected pre-post assessments on participating students, insufficient data had been entered into a database for analysis at the time of the formative evaluation. The program developed a database for such information, such that the infrastructure was in place for recording the pre-post assessments. Unfortunately, without quarterly pre-post assessments, the evaluation report was less capable of showing progress of the students on the approved objectives. Moreover, the program cannot make data-driven decisions about program refinement or professional training needs without indications of student and program progress from such metrics. The program was encouraged to ensure all objectives were assessed with pre-post assessments, where proposed. The program fully implemented pre-post assessments for science and engineering under the EiE and Lego WeDo curricula. However, the program had not established pre-post assessments for mathematics. Regardless, the program implemented 16 pre-post assessments that were well-designed to ensure progress could be shown on individual students. All pre-post assessment results were included in the overall electronic attendance database.

IMPLEMENT ACADEMIC-BASED PORTFOLIO ASSESSMENTS

In addition to pre-post assessments, the program originally proposed to collect data on student progress using Science Portfolios (STEM Journals). The program was working on these items through various project-based learning plans, as witnessed by the evaluator during site visits of program sites. However, there was no data to show these items were assessed by teachers and/or whether there was a rubric used for scoring such items. The ultimate decision after working with the evaluator, district leaders, school administrators, and the iLab teachers was to remove this as a metric for the 21st CCLC program. Rather, the focus with portfolios would be on using the information included therein to guide differentiated instruction and serve as a continuous assessment of student progress.

ENHANCE PROFESSIONAL DEVELOPMENT DOCUMENTATION

Based on information obtained during site visits, it appeared that there had been some difficulty scheduling time for all the iLab teachers to meet as a group each month. This seems to be largely secondary to the method of scheduling the iLab component into the regular school day. It is critical that the teachers have regular opportunities to

meet and work together on the development and revision of the iLab projects. This was particularly important during the first year, as they work to develop a model that will be applied in the next year of programming (e.g., changing how the units are taught, incorporating pre-post assessments, etc.). The District was encouraged to review and implement the proposed level of professional development and meetings within the grant application. It was noted that the District has provided an incredible level of support from resource teachers and administrators not funded under the project, and it would be remiss to ignore the tremendous positive impact this has had in implementing these projects as proposed. Ultimately, during the second half of the program year, the program had successfully increased the level of professional support and training provided to 21st CCLC STEM iLab Teachers. The program also improved the method of documenting professional development trainings and meetings across the 21st CCLC iLab project.

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RECOMMENDATIONS

Overall, the School District of Palm Beach County 21st CCLC STEM iLab has made outstanding progress towards implementing the primary activities and services of the 21st CCLC program and has made strong progress towards achieving the approved grant objectives. The program would likely have demonstrated progress towards every objective, but the limitations of data provided did not allow for a thorough assessment of some objectives (particularly adult family member objectives). Regardless, because of the unique challenges associated with developing a strong and diverse 21st CCLC program, results presented in this summative report should be viewed as reflecting a "work in progress," rather than a final outcome. It is believed that the findings and recommendations within this report will help guide future efforts toward enhancing the program and furthering progress towards stated goals and objectives. Within the model of continuous program improvement, several recommendations for further enhancing this 21st CCLC program are provided. These are not considered "weaknesses," as the program is already focused on addressing many of these challenges and/or implementing these recommendations. Rather, this section serves to document those areas where the program is planning or should plan to focus additional attention during the next operational year.

It is important that the program review the entire report, as some recommendations are made within individual sections, but are not repeated under this section. Unlike the recommendations made in the prior sections, the following recommendations are more critical and/or require more information that was possible in the prior sections. All recommendations are carefully considered and are only included if they will either help the program make greater impact on students and/or bring the program into compliance with the rules, regulations, and/or requirements of the Florida Department of Education and/or the US Department of Education.

ENSURING ADEQUATE DOSAGE TO ENTIRE SCHOOL

Any actualized impact of the 21st CCLC program requires successful implementation of the recruitment and enrollment plan, thus ensuring the highest level of student participation. The 21st CCLC STEM Investigation Lab under the School District of Palm Beach County proposed to serve the entire school population at four elementary schools, providing project-based learning activities to all students in all grades. At most schools, the program has fully implemented the enrollment plan and has

established services with students in all grade levels. However, as of the formative evaluation, some schools had not established services with all students and it did not appear that all students would receive the proposed level of services. While the program was not operating exactly as proposed, it did not seem to present a significant issue at that time. Unfortunately, while the quality of programming was not reduced, operational differences between sites had some effect on quantity of services. The program is encouraged to ensure all students receive adequate dosage of the 21st CCLC iLab program to help address approved objectives. The program is reminded of the minimum operations proposed for the second year of the program:

- Grade K: 1,080 minutes or 18 hours/year
- Grade 1: 1,080 minutes or 18 hours/year
- Grade 2: 1,080 minutes or 18 hours/year
- Grade 3: 1,440 minutes or 24 hours/year
- Grade 4: 1,800 minutes or 30 hours/year
- Grade 5: 1,800 minutes or 30 hours/year

OBJECTIVE PROGRESS: STAKEHOLDER SURVEYS

The program proposed to collect student and parent surveys at least once per year as part of the continuous improvement process – with student surveys administered twice per year. These surveys were not available for the summative report. In future years, the program is encouraged to provide these surveys at the end of November and then at the end of the academic program year. The state parent and student surveys can be used at the end of the current year in lieu of program-generated surveys, though the program is encouraged to look at the language of the approved objectives and ensure the state surveys address all parts of the objectives. All data from surveys must be transferred to an electronic database and connected to the student number to allow for analysis, evaluation, and submission to the US Department of Education. The following provides the general items that should be addressed within each of the stakeholder surveys:

Student Survey:

- Improvement in understanding and application of scientific principles
- Increased understanding and interest in STEM field (Science / Engineering)
- Increased dedication, motivation, and commitment to educational process

Parent Survey:

- Increased involvement in child's education
- Increased exposure and understanding of student educational resources

IMPLEMENT DOCUMENTATION OF PARENT ACTIVITIES

The School District of Palm Beach County 21st CCLC iLab program proposed to collect specific data from adult family members and parents related to development of parenting skills and literacy skills. These data were to include (1) participation in adult family member events, and (2) Parent And Child Together (PACT) Time Logs. Unfortunately, although the program has worked hard to encourage and obtain family member participation in the 21st CCLC program, these metrics have not been recorded and/or were not provided for the purposes of evaluation. The program is encouraged to collect these data and ensure that data are maintained in electronic databases for continuous improvement and evaluation purposes. Data on activities should include fliers, agenda, and sign-in sheets.

ENHANCE DOCUMENTATION OF PROGRAM PARTNERSHIPS

One of the goals of the 21st CCLC program is to continue activities beneficial to students and their families after the three-year project period. The SDPBC 21st CCLC STEM iLab system has engaged several partners to support the 21st CCLC program. While the program provided a list of partners supporting 21st CCLC, it is important that the SDPBC maintain documentation as to which partners are supporting the 21st CCLC program directly or indirectly, and how the support is utilized. Of most importance is the estimated valuation of the partnership and any services or support provided. This should be a reasonable estimate, but does not need to be exact. Ideally, when possible, the program should obtain a partnership letter or partnership form from each partner where they indicate the estimated value of services provided in support of the 21st CCLC ELT Program. The table below provides a simple process for ensuring the proper data is collected for federal and state reporting. Every partner directly or indirectly supporting 21st CCLC should be included and added as they become engaged with the program and/or school.

Agency Name	*Type of Organization	Direct / Indirect Support	Estimated Value ($) of Contributions	Estimated Value ($) of Subcontract	Type of Service Provided**
South Florida Sci. Mus.	**MUS**	**Direct**	**$12,000**	**--**	Training

**School District (SD), Community-Based or other Non-Profit Organization (CBO), Nationally Affiliated Nonprofit - Boys & Girls Club (BGC), Nationally Affiliated Nonprofit - YMCA/YWCA (YMCA), Nationally Affiliated Nonprofit - Other Agency (NPOO), Faith-Based Organization (FBO), Charter School (CS), Private School (PS), College or University (CU), Regional/Intermediate Education Agency (IEA), Health-Based Organization (hospital/clinic/etc.) (HBO), Library (LIB), Museum (MUS), Park/Recreation District (PRD), Other Unit of City or County Government (CNT), For-Profit Entity (FPO), Bureau of Indian Affairs School (IAS), Other (OTH)*

PARTNERSHIP ADVISORY BOARD

The program is encouraged to ensure this advisory board is developed during the second program year. Given the partners involved with the project, the advisory board should involve the school principals, BGC of Palm Beach County, Prime Time Palm Beach County, and the South Florida Science Museum. There is no need for the representatives to meet in person, if that is precluded from schedules and availability, as effective partnership advisory board meetings can be held via conference call and/or through an online 'chat' system already available to the District (e.g., Edmodo). The partners should be educated on the grant application and specific requirements that cannot be altered prior to requesting input about programmatic or operational changes. The program is encouraged to also maintain necessary documentation for all advisory board meetings, including meeting agenda, sign-in sheets, and any communications. ***Example table:***

Location	Date	Times	Members Present
District Offices	***08/01/2013***	***9:00am-10:00am***	*5 Members: 2 Partners, 3 CLCC Staff*

IMPLEMENT PROGRAM WEBSITE

Implementation and sustainability is further enhanced by strong information dissemination about the 21st CCLC program. In this regard, the SDPBC proposed a number of proven methods for disseminating information to program stakeholders, most of which were carried out and brought positive attention to the 21st CCLC program. However, the program also proposed to create a project website to showcase activities, highlight projects, demonstrate best-practices, and provide links to partner sites, resources, and program contacts. Unlike the other dissemination methods proposed, this method was a requirement of the Florida Department of Education and, therefore, cannot be considered an optional method. As such, the program is encouraged to develop a website specific for the 21st CCLC ELT program with the elements outlines above. The FLDOE requires that the website be updated at least monthly, so the program is also encouraged to create a sub-page under 21st CCLC that tracks the dates and specifics of each update (e.g., "December 11, 2013: Updated robotics project with photos." "November 25, 2013: Updated site by adding summative evaluation report from 2012-2013.").

<<----------END OF REPORT---------->>

If you are interested in learning more about the
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The 21st Century Community Learning Centers (21st CCLC) initiative is conducted with support from a grant from the Bureau of Family and Community Outreach (BFCO) within the Florida Department of Education. The overall direction of the initiative is provided by Ms. Ive Vintimilla, Director of the Florida 21st CCLC Program. Any questions regarding this report may be directed to the Center for Assessment, Strategic Planning, Evaluation and Research.

Report Prepared By

Center for Assessment, Strategic Planning, Evaluation and Research (CASPER)