



# Evaluating 21<sup>st</sup> Century Community Learning Centers in the Commonwealth of Virginia

Spring Institute  
March 12, 2013



**Dr. Todd Zoblotsky, Research Associate Professor**  
*Center for Research in Educational Policy*  
*The University of Memphis*





# Overview of the Evaluation Process

# Federal Requirement for Evaluation of 21<sup>st</sup> CCLC

**Sections 4402(c)(3)(C) and 4403(a)(13) of Title IV, Part B, 21<sup>st</sup> Century Community Learning Centers (21<sup>st</sup> CCLC) Grant, of the Elementary and Secondary Education Act (ESEA) requires that state education agencies provide a comprehensive evaluation of the effectiveness of 21<sup>st</sup> CCLC programs and activities within the state.**

# How Evaluation Helps Virginia's 21<sup>st</sup> CCLC Programs

**The Virginia Department of Education uses the information collected in the evaluation process for decision making, program refinement, and purposes of quality improvement.**

# Purpose of Evaluation

**Identification of successful practices**

**Decision making based on data**

**Measurement of program impact**

**Identification of successful practices**

**Accountability for federal funds to demonstrate fiscal responsibility**

**Meets goal of continuous program improvement**



# What Will Be Measured?

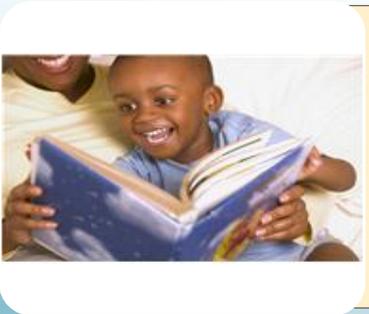
# Evaluation Questions



Were the neediest students provided academic enrichment and support activities?



Were a variety of activities provided to complement the regular academic program?



Were literacy and other learning opportunities made available to parents?

# Federal Objectives

## 1: Benefits to participants

- Educational change
  - Improvement in mathematics
  - Improvement in reading/language arts
- Positive behavioral change

## 2: High-quality services

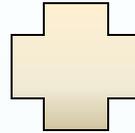
- Educational assistance
- Enrichment and support activities
- Community involvement
- Services to parents
- Number of extended hours

## 3: Priority for Greatest Needs

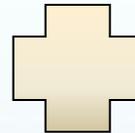
- Service to children and community members with the greatest needs for expanded learning opportunities

# State Objectives

**1) Improvement in proficiency in mathematics, as measured by Standards of Learning (SOL) test scores (provided by VDOE)**



**2) Improvement in proficiency in reading/language arts, as measured by Standards of Learning (SOL) test scores (provided by VDOE)**



**3) Provide or increase the number of activities and services for adults**

# Uses of 21<sup>st</sup> CCLC Data

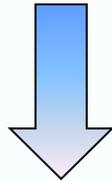
**Preparing the  
federally mandated  
Virginia 21<sup>st</sup> CCLC  
evaluation report**

**Identifying activities  
associated with successful  
programs**

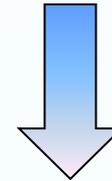
**Sharing findings with  
grantees to improve  
programs**

# How the Evaluation Process Works in Virginia

**The University of Memphis' Center for Research in Educational Policy (CREP) will conduct the evaluation**



**Two mandatory data collection instruments**



**21<sup>st</sup> CCLC Student Data Collection Survey (SSWS)**

**ALERT (in PPICS)**

# 21<sup>st</sup> CCLC Statewide Student Data Collection Survey

**21<sup>st</sup> CCLC program attendance (school year and summer)**

**Spring SOL student participants by division and school**

- Completed through Department's Single Sign-on for Web Systems (SSWS): **September-October** window of opportunity
- Standards of Learning (SOL) assessment participation in spring of collection year
- Responsibility of coordinator or designated data entry person to enter the number of days that each individual student participated in the 21<sup>st</sup> CCLC program, including days attended during the summer

# Online Annual Local Evaluation Report Template (ALERT)

**Facilitates consistent  
reporting statewide**

**Affords opportunities to  
report information  
unique to each program**

- Completed through 21<sup>st</sup> CCLC Profile and Performance Information Collection System (PPICS): Deadline in **July**
- Official e-mail notification with instructions and submission deadline from VDOE: Sent in **June**
- Must be completed for each center/site within each grant

# Online Annual Local Evaluation Report Template (ALERT)

- Have your outcomes and evidence ready when you sit down to complete the ALERT
  - Achievement outcomes
  - Activities and frequency
  - Participation rates
- Download full instructions from VDOE 21<sup>st</sup> CCLC website:  
[http://www.doe.virginia.gov/federal\\_programs/esea/title4/part\\_b/index.shtml](http://www.doe.virginia.gov/federal_programs/esea/title4/part_b/index.shtml)

# Benefits of Online Reporting for Grantees

- Consistent reporting
- Improved accountability
- Greater identification of:
  - What is effective
  - Needs for improvement
  - Program impact

# The 2011-2012 State Evaluation

The purpose of the evaluation was to determine whether the state-funded 21<sup>st</sup> Century Learning Communities were meeting Virginia's program objectives:

- **To show gains in reading/language arts and mathematics** as measured by Standards of Learning (SOL), Virginia Alternate Assessment Program (VAAP), and Virginia Grade Level Alternative (VGLA) test scores;
- For **family members** of students who participate in 21<sup>st</sup> Century Community Learning Centers to increase their engagement in opportunities for literacy and related educational development

# The 2011-2012 State Evaluation

- 132 of 132 (100%) total active centers submitted data.
- This report also provides an overview of the centers' success in achieving objectives they chose to pursue in addition to those required by the state.
- Data Sources:
  - Annual Local Evaluation Report Template (ALERT)
  - PPICS
  - SOL, VAAP, and VGLA scores in reading/language arts and mathematics

# Note

- **ALERT** and **PPICS** results presented are for the **2011-2012** program year.
- **SOL**, **VAAP**, and **VGLA** achievement analysis results presented are for the **2010-2011** program year.
- The **achievement** analysis for **2011-2012** will be delivered by Summer 2013.

# The 2011-2012 State Evaluation

1. What is the nature of the Virginia 21<sup>st</sup> CCLC programs and the level of participation by students?
2. To what degree did the programs meet Virginia's objectives? (reading/language arts, mathematics, and opportunities for parent education)
3. Are there relationships between attendance at a 21<sup>st</sup> CCLC center, nature and time allocated to activities, hours of operation and academic achievement?
4. What "promising practices" and challenges were identified by centers regarding achievement of required objectives?

# Question #1: Nature of the Programs

- 86.9% of Centers were operated by schools
- Hours open most frequently ranged between six and 15 hours per week (65.9% of centers)
- Largely staffed by certified teachers
- 25,710 students enrolled in 2011- 2012
- 42.9% of all students attended regularly in 2011- 2012 (defined as 30 days or more)

# Question #1: Nature of the Programs

- Enrollment and attendance were greatest for students in **Grades 3-8**. The trends of (1) rising middle and high school enrollment, (2) rising middle school attendance, and (3) declining elementary school enrollment and attendance continued in 2011-2012.
- **58.4%** of students were classified as “economically disadvantaged”
- **40.6%** students identified as White
- **41.5%** of students identified as African-American

# Question #2: To what degree did the programs meet Virginia's objectives?

**Question 2 Objective: Increase student achievement in reading/language arts and mathematics**

- Two types of **statistical** analyses were conducted on the 2010-2011 data by subject (reading/language arts and mathematics)
- Compared Treatment vs. Control
  - Treatment: Attended 21<sup>st</sup> CCLC for **30 or more days**
  - Control: Eligible, but had **zero** days of attendance

# Question #2: To what degree did the programs meet Virginia's objectives?

**Question 2 Objective: Increase student achievement in reading/language arts and mathematics**

- Analysis 1: Proficiency level
  - Used 2009-2010 and 2010-2011 data
  - Based on all available test data (including [SOL](#), [VAAP](#), and [VGLA](#))
  - Proficiency level analyses permit the inclusion of data from all state assessments, including alternative assessments in Virginia.

# Question #2: To what degree did the programs meet Virginia's objectives?

**Question 2 Objective: Increase student achievement in reading/language arts and mathematics**

- Analysis 2: SOL standardized scaled scores
  - Only those who took the **SOL** in both 2009-2010 and 2010-2011.
  - The SOL scaled scores from both years were converted to standardized scores (**z-scores**) due to the fact that the SOL tests are **not** comparable across years and grades.
  - Standardizing scores allowed different grade levels to be **combined** into one analysis.

# Question #2: To what degree did the programs meet Virginia's objectives?

**Question 2 Objective: Increase student achievement in reading/language arts and mathematics**

- Separate Grade 3 descriptive analyses
  - No prior-year test data available for third-grade
  - Used **proficiency levels on SOL, VAAP, and VGLA** (based on the percentage scoring Proficient or Advanced) and **mean (i.e., average) scaled scores on SOL**.
  - Compared (1) 21<sup>st</sup> CCLC participants and non-participants and (2) 21<sup>st</sup> CCLC participants and all Commonwealth third-grade students.

# Question #2: To what degree did the programs meet Virginia's objectives?

**Question 2 Objective: Increase student achievement in reading/language arts and mathematics**

- Effects of participation by subgroup for the **statistical** analyses:

Subgroup	Proficiency	SOL Scaled Scores
IEP Status	√	
LEP Status	√	
Economically Disadvantaged Status	√	√

# Question #2: To what degree did the programs meet Virginia's objectives?

## Question 2 Objective: Increase student achievement in reading/language arts and mathematics

- One-to-one matching process for the 3<sup>rd</sup>-8<sup>th</sup> grade **statistical** analyses only
  - Each treatment student paired with a control student using propensity scores based on several matching criteria
  - Propensity scores summarize how similar control students are to treatment students. Those with similar propensity scores are more alike based on the matching criteria used.
  - Given the inability to randomly assign students to the treatment and control groups (as participation in the 21st CCLC program is voluntary), the matched-samples comparison approach used in these analyses is one of the most rigorous alternatives for determining the effect of 21st CCLC on student achievement (see Slavin, 2008 and What Works Clearinghouse, 2011).
  - There were no statistically significant differences between the treatment and control groups on any of the matching variables in either reading or mathematics.

# Question #2: To what degree did the programs meet Virginia's objectives?

## Variables Used in the Calculation of Propensity Scores

### Prior Year (2009-10)

1. Test level (grade level of the test)
2. Test source (SOL, VAAP, VGLA)
3. Test subject for mathematics (including Algebra 1, Geometry, and Mathematics)
4. Grade level
5. Standardized scaled score in mathematics or reading

### Current Year (2010-11)

1. Test level
2. Test source
3. Test subject for mathematics
4. Grade level
5. LEP status
6. IEP status
7. Economically Disadvantaged status
8. Ethnicity
9. Division
10. School

# Question #2: To what degree did the programs meet Virginia's objectives?

## Question 2 Objective: Increase student achievement in *reading/language arts*

- Results from 2010-2011 statistical analyses for Grades 3-8
  - Included 2 years of data (controlled for prior-year achievement)
- 21<sup>st</sup> CCLC participation (Yes/No) was statistically significant in predicting both reading/language arts proficiency and standardized SOL scaled scores for the overall samples, but not differences by subgroup.

# Question #2: To what degree did the programs meet Virginia's objectives?

## Question 2 Objective: Increase student achievement in *reading/language arts*

- The odds of scoring proficient for students who participated in 21st CCLC in 2010-2011 were lower than that of the control students, with an effect size (-0.32) considered substantively important based on What Works Clearinghouse (WWC) standards ( $\geq \pm 0.25$ ).
- Standardized scaled scores of students who participated in 21st CCLC in 2010-2011 were lower than those of the control students. While statistically significant, the effect size for the standardized scaled score difference (-0.14) would not be considered substantively important based on WWC standards.

# Question #2: To what degree did the programs meet Virginia's objectives?

## Question 2 Objective: Increase student achievement in *reading/language arts*

- 21<sup>st</sup> CCLC Students Attending at Least 30 Days vs. Controls (Eligible but with Zero Days Attended)

Predictor	3rd-8th	
	Proficiency	SOL Scaled Score
Group (21 <sup>st</sup> CCLC or control)	Control Group	Control Group
Group x IEP	Non-significant	Non-significant
Group x LEP	Non-significant	Non-significant
Group x Economically Disadvantaged	Non-significant	Non-significant

# Question #2: To what degree did the programs meet Virginia's objectives?

## Question 2 Objective: Increase student achievement in *reading/language arts*

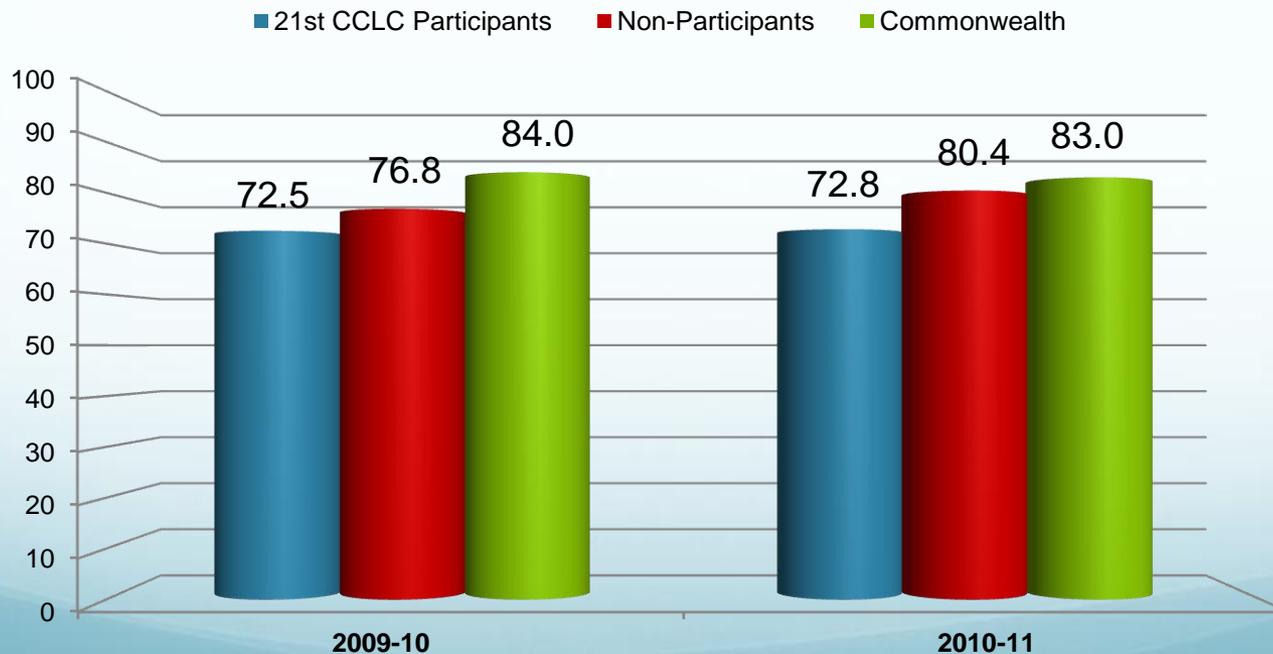
- Effects of participation by subgroup for the 3<sup>rd</sup> grade descriptive analyses: 2009-2010 and 2010-2011

Comparison	Proficiency	SOL Scaled Scores
All Students	Treatment vs. Control	Treatment vs. Control
Gender		
Ethnicity		
Economically Disadvantaged		
Not Economically Disadvantaged	Treatment vs. Commonwealth	
With Disabilities		
Not with Disabilities		
Limited English Proficient		
Not Limited English Proficient		

# Question #2: To what degree did the programs meet Virginia's objectives?

Question 2 Objective: Increase student achievement in *reading/language arts*

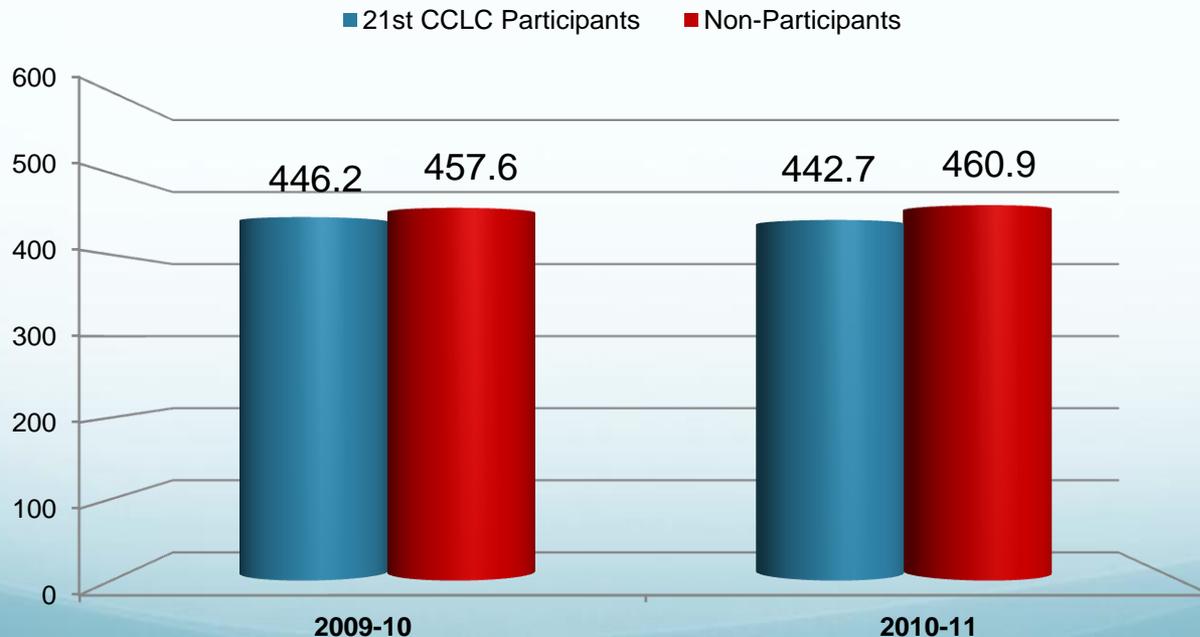
- 3<sup>rd</sup> Grade Reading/Language Arts Proficiency: All Students



# Question #2: To what degree did the programs meet Virginia's objectives?

**Question 2 Objective: Increase student achievement in *reading/language arts***

- 3<sup>rd</sup> Grade SOL Reading/Language Arts Scaled Scores: All Students



# Question #2: To what degree did the programs meet Virginia's objectives?

## Question 2 Objective: Increase student achievement in *mathematics*

- Results from 2010-2011 statistical analyses for Grades 3-8
  - 2 years of test data available (controlled for prior-year achievement)
- 21<sup>st</sup> CCLC participation (Yes/No) was statistically significant in predicting both mathematics proficiency and mathematics standardized SOL scaled scores, but not differences by subgroup.

# Question #2: To what degree did the programs meet Virginia's objectives?

## Question 2 Objective: Increase student achievement in *mathematics*

- For students in grades three through eight who attended a 21st CCLC program for at least 30 days, the categorical and scaled score analyses both showed a statistically significant impact of 21st CCLC participation on statewide mathematics assessments, with control students outperforming participants.
- The effect sizes for both the proficiency (-0.53) and scaled score analyses (-0.26) were substantively important based on WWC guidelines.

# Question #2: To what degree did the programs meet Virginia's objectives?

## Question 2 Objective: Increase student achievement in *mathematics*

- 21<sup>st</sup> CCLC Students Attending at Least 30 Days vs. Controls (Eligible but with Zero Days Attended)

Predictor	3 <sup>rd</sup> -8 <sup>th</sup>	
	Proficiency	SOL Scaled Score
Group (21 <sup>st</sup> CCLC or control)	Control Group	Control Group
Group x IEP	Non-significant	Non-significant
Group x LEP	Non-significant	Non-significant
Group x Economically Disadvantaged	Non-significant	Non-significant

# Question #2: To what degree did the programs meet Virginia's objectives?

## Question 2 Objective: Increase student achievement in *mathematics*

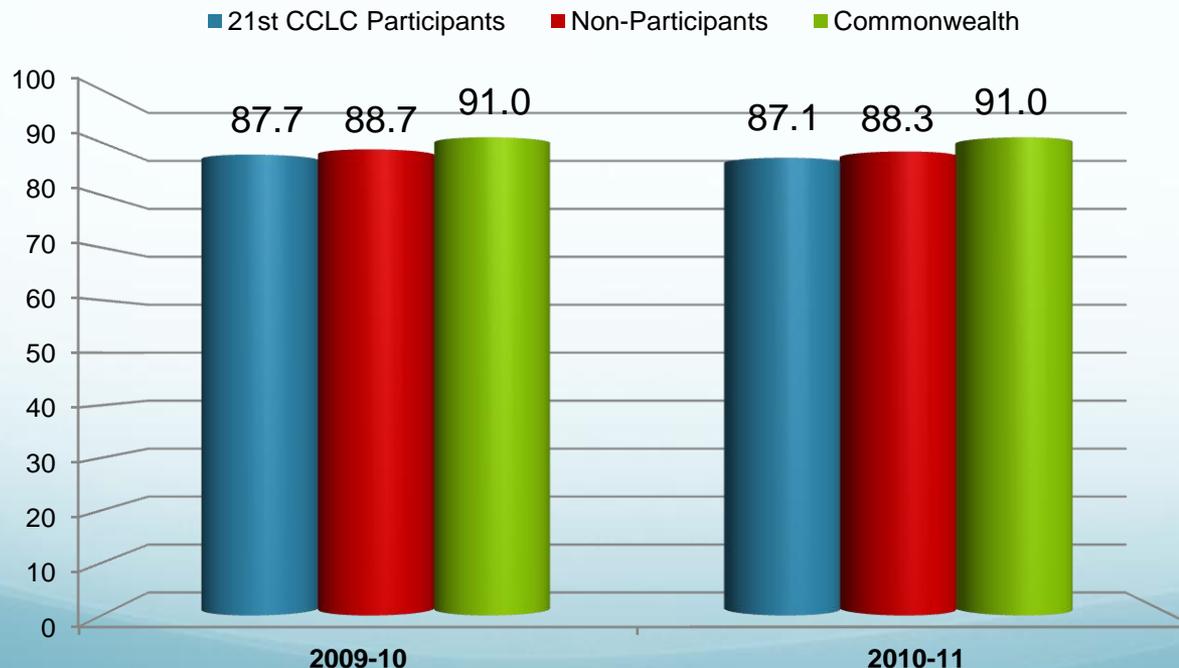
- Effects of participation by subgroup for the 3<sup>rd</sup> grade descriptive analyses: 2009-2010 and 2010-2011

Comparison	Proficiency	SOL Scaled Scores
All Students	Treatment vs. Control	Treatment vs. Control
Gender		
Ethnicity		
Economically Disadvantaged		
Not Economically Disadvantaged	Treatment vs. Commonwealth	
With Disabilities		
Not with Disabilities		
Limited English Proficient		
Not Limited English Proficient		

# Question #2: To what degree did the programs meet Virginia's objectives?

## Question 2 Objective: Increase student achievement in *mathematics*

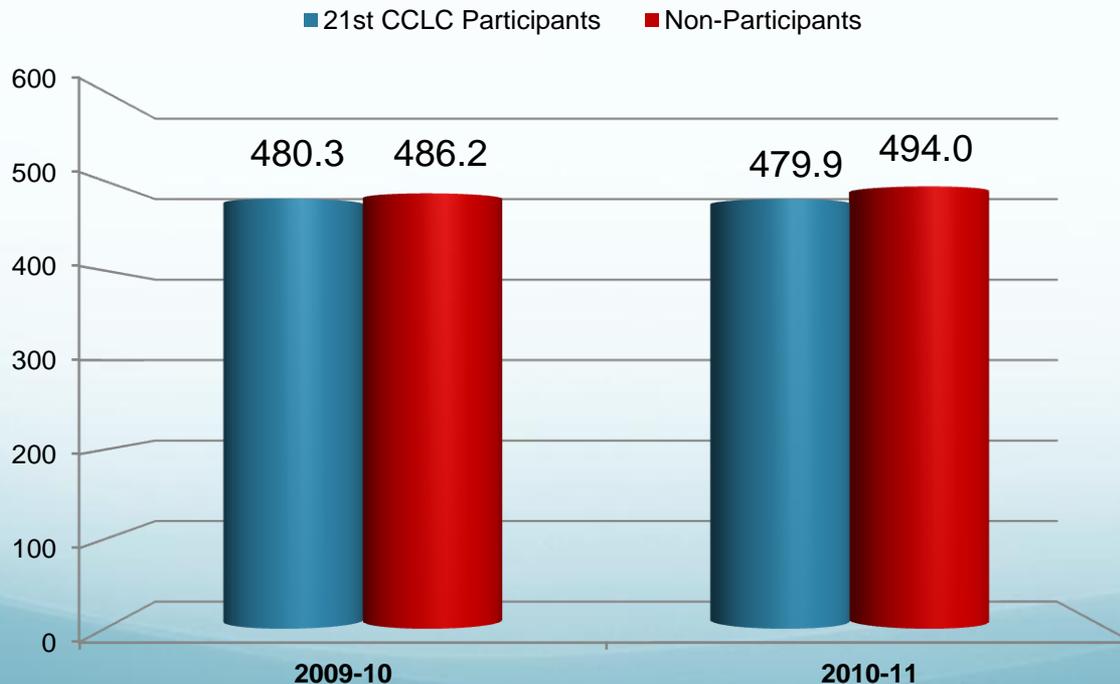
- 3<sup>rd</sup> Grade Mathematics Proficiency: All Students



# Question #2: To what degree did the programs meet Virginia's objectives?

## Question 2 Objective: Increase student achievement in *mathematics*

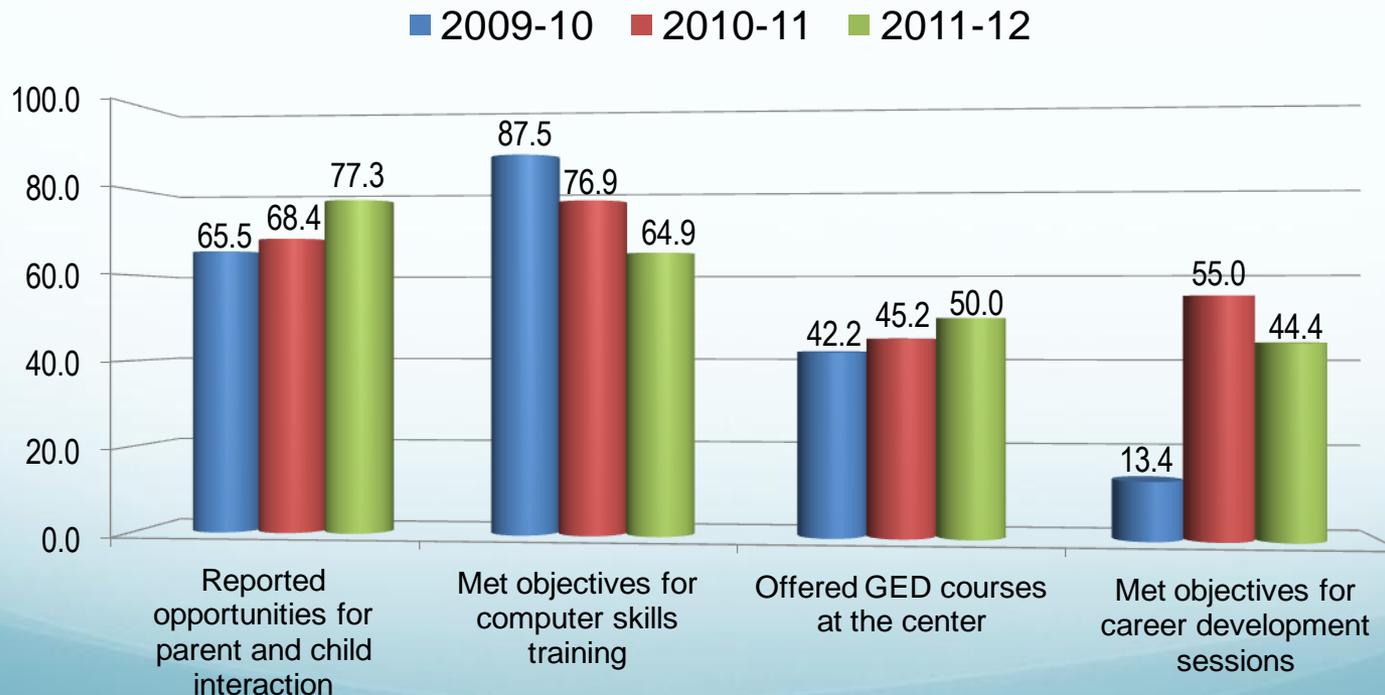
- 3<sup>rd</sup> Grade SOL Mathematics Scaled Scores: All Students



# Question #2: To what degree did the programs meet Virginia's objectives?

## Question 3 Objective: Provide parent education

- Percentage of Centers that:



# Question #3: Are there relations between attendance, nature of and time allocated to activities, hours of operation, and improvement in student achievement?

- Reading/Language Arts Grades 3-8

Center Variable	Proficiency	SOL Scaled Score
Total Hours Open Per Week		
Number of Paid School-Day Teachers		
Total Hours of Activities		
Total Number of Activities		Each increase in the number of activities results in a .003 increase in standardized scaled scores.
Number of Days Attended		

Green cells are statistically significant and positive. Red cells are statistically significant and negative.

Blank cells were not statistically significant.

# Question #3: Are there relations between attendance, nature of and time allocated to activities, hours of operation, and improvement in student achievement?

- Mathematics Grades 3-8

Center Variable	Proficiency	SOL Scaled Score
Total Hours Open Per Week		Each increase in the number of hours open results in a .006 increase in standardized scaled scores.
Number of Paid School-Day Teachers	Each additional school-day teacher added was associated with a <b>1 percent</b> increase in the odds of scoring proficient.	
Total Hours of Activities		
Total Number of Activities		
Number of Days Attended	Each additional day of participation would lead to a <b>1 percent</b> increase in the odds of achieving proficiency.	

Green cells are statistically significant and positive. Red cells are statistically significant and negative.

Blank cells were not statistically significant.

# Question #4: What “promising practices” and challenges were identified by centers regarding achievement and required objectives?

- A positive relationship was reported between improvements in student academic achievement and programs featuring academic assistance, provided before or after school. Components of academic assistance programs reported to be particularly successful:
  - Tutoring
  - Homework help
  - Individualized instruction

# Question #4: What “promising practices” and challenges were identified by centers regarding achievement and required objectives?

- Most frequently cited components of successful academic enrichment classes:
  - Hands-on learning
  - High-yield learning activities
  - Non-traditional instruction
  - Project-based learning
  - Scientifically-based programs

# Question #4: What “promising practices” and challenges were identified by centers regarding achievement and required objectives?

- Grantees reported providing a variety of services and activities to meet the needs and interests of families.
  - Family Night
  - Translation services
  - Parenting workshops
  - Open, clear, and consistent communication

# Question #4: What “promising practices” and challenges were identified by centers regarding achievement and required objectives?

- Staff practices reported to contribute to the success of center objectives:
  - Open, regular, and consistent communication and collaboration with school staff and regular meetings with other center staff
  - Monitoring alignment of the after-school program with school-day practices, through classroom observations and other activities
  - Supporting the after-school instructional staff:
    - High-quality manipulatives and other materials
    - Professional development in technology integration and core content areas
    - Teacher autonomy backed by strong resources “to allow teacher creativity and experience to shine”

# Question #4: What “promising practices” and challenges were identified by centers regarding achievement and required objectives?

- Similar to prior years, the predominant challenge reported in 2011-2012 concerned low or inconsistent parent involvement, particularly in GED and parent training programs.
  - Childcare responsibilities
  - Conflicting work schedules
  - Lack of transportation

# Question #4: What “promising practices” and challenges were identified by centers regarding achievement and required objectives?

- Many grantees indicated that difficulties in meeting their objectives for student achievement in 2011-2012 would be mitigated once they improved their programs' alignment
  - Increased rigor of the new mathematics SOL objectives and state assessment
  - Specific remediation needs of students served at their centers
  - Resources and appeal of programs to parents and families

# Conclusions

- Results from the **2010-2011** analysis indicate centers are implementing the 21<sup>st</sup> CCLC program in accordance with Federal purposes and guidelines.
- Based on the results of the **statistical analyses** of Grades 3-8 using two years of data:
  - Attendance of over 30 days did not show positive effects in either reading/language arts or mathematics in terms of proficiency or SOL scaled scores in 2010-2011.
  - Increased numbers of paid school-day staff and numbers of days attended **positively** impacted student mathematics proficiency in 2010-2011. However, the impact was small.
  - SOL reading/language arts scaled scores were **positively** impacted when centers had more total number of activities, but the impact was small.
  - SOL mathematics scaled scores were **positively** impacted when centers were open more total hours, though the magnitude was small.

# Conclusions

- Based on the results of the **third-grade descriptive** analyses, 21<sup>st</sup> CCLC participants overall (All Students, 2010-2011):
  - Third-grade grade 21st CCLC participants in 2010-2011 were outperformed by non-participants and the Commonwealth in **reading proficiency** for all students combined and all available subgroups, while participants outcomes were somewhat better in **mathematics proficiency**, outperforming non-participants and the Commonwealth for three subgroups.
  - In terms of **SOL scaled scores**, third-grade grade 21st CCLC participants in 2010-2011 were outperformed by non-participants in nearly all comparisons, doing slightly better in mathematics, where participants did better in two subgroups, as compared to reading (where they tied for one subgroup).

# Conclusions

- In 2010-2011, centers offered a variety of programs and incentives aimed at increasing parental education and involvement.

# References

- Slavin, R.E. (2008). Perspectives on evidence-based research in education, what works? Issues in synthesizing educational program evaluations. *Educational Researcher*, 37(1), 5-14.
- What Works Clearinghouse (2011). Procedures and standards handbook (Version 2.1). Washington, DC: Author. Retrieved from [http://ies.ed.gov/ncee/wwc/pdf/reference\\_resources/wwc\\_procedures\\_v2\\_1\\_standards\\_handbook.pdf](http://ies.ed.gov/ncee/wwc/pdf/reference_resources/wwc_procedures_v2_1_standards_handbook.pdf)

**Questions?**



**Questions?**

**Questions?**

# Programmatic Contact

**Diane Jay**

**Virginia Department of Education**

**[Diane.Jay@doe.virginia.gov](mailto:Diane.Jay@doe.virginia.gov)**

**(804) 225-2905**

# Technical Questions

**Jack D. (Dan) Strahl,  
Project Coordinator  
CREP, University of Memphis  
[jstrahl@memphis.edu](mailto:jstrahl@memphis.edu)  
Direct: (901) 678-4157  
Toll-free: (866) 670-6147**