



Evaluating 21st Century Community Learning Centers in the Commonwealth of Virginia

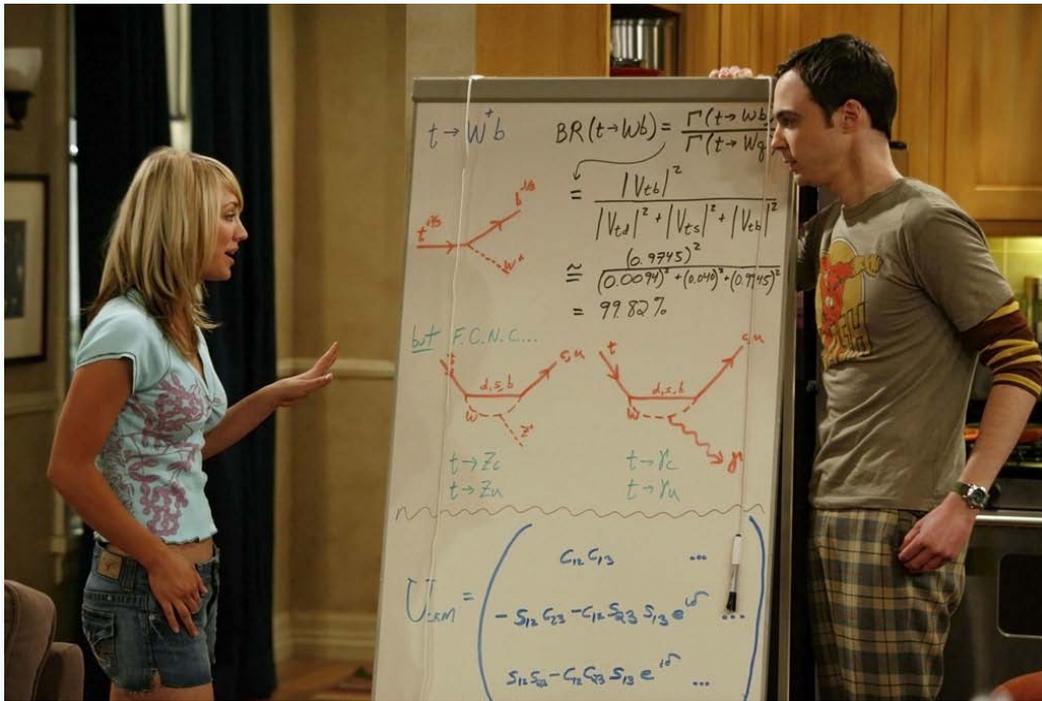
Spring Institute
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Purpose of Evaluation



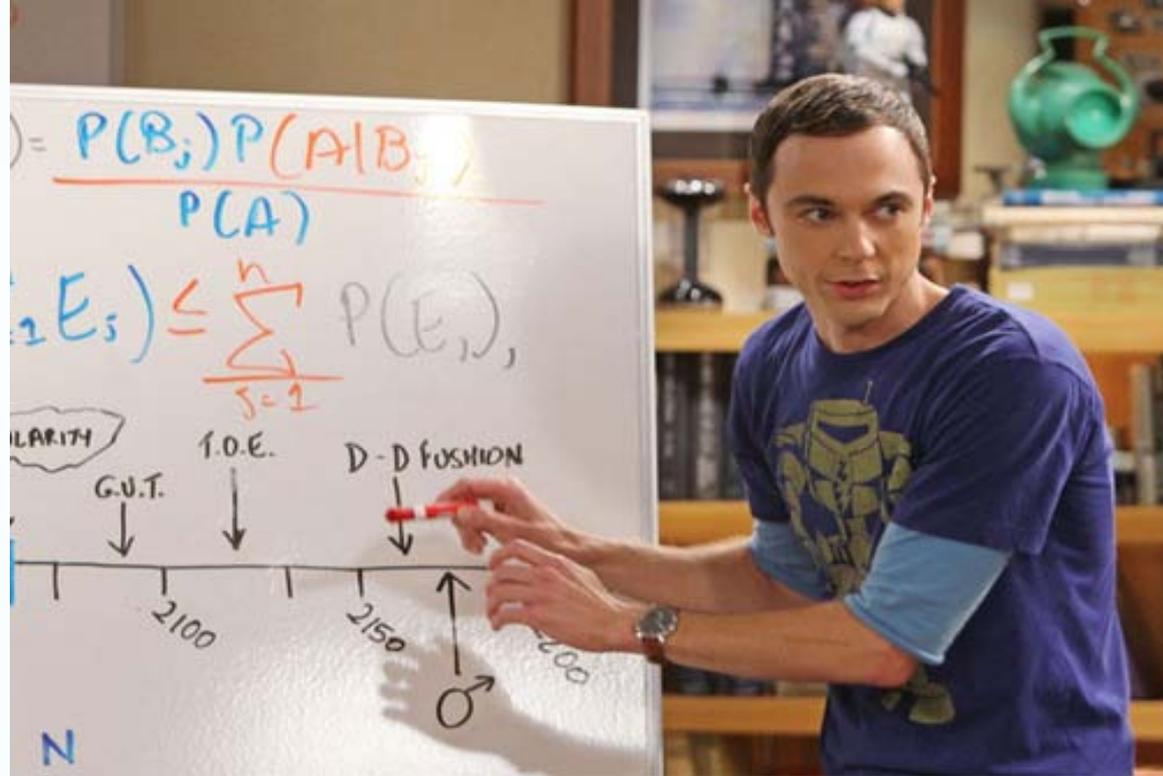
Identification of successful practices

Decision making based on data

Measurement of program impact

Accountability for federal funds to demonstrate fiscal responsibility

Meet goals of continuous program improvement



Program Objectives Evaluation Questions and Measures

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 for 2012-2013

1) Improve student academic achievement in reading

2) Improve student academic achievement in mathematics

3) Provide opportunities for parental education

Uses of 21st CCLC Data

**Preparing the
federally mandated
Virginia 21st CCLC
evaluation report**

**Identifying activities
associated with successful
programs**

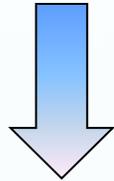
**Sharing findings with
grantees to improve
programs**

2012-2013 State Evaluation Questions

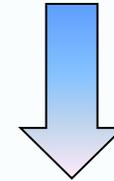
1. What is the nature of the Virginia 21st CCLC programs and the level of participation by students?
2. To what degree did the programs meet Virginia's objectives? (reading/language arts, mathematics, and opportunities for parent education)
3. In what ways do attendance at a 21st CCLC, type and time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

How the Evaluation Process Works

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



Two mandatory data collection instruments



21st CCLC Student Data Collection Survey (SSWS)

ALERT (in PPICS)

Virginia DOE provided data file containing:

- **2 years (2010-11 and 2011-12) of assessment scores**
- **Student demographic data**
- **Days of attendance at a center**

The 2012-2013 State Evaluation

- 144 of 144 (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, VMAST, and VGLA scaled scores and proficiency levels in reading/language arts and mathematics

Note

- **ALERT** and **PPICS** results presented are for the **2012-2013** program year.
- **SOL**, **VAAP**, **VMAST**, and **VGLA** achievement analysis results presented are for the **2011-2012** program year.
- The **achievement** analysis for **2012-2013** will be delivered by Summer 2014.



ROCK PAPER SCISSORS LIZARD SPOCK

Scissors cuts paper covers rock crush lizard poisons Spock smashes
scissors decapitates lizard eats paper disproves Spock vaporizes rock
crushes scissors

Evaluation Methodology and Results

Question #1: Nature of the Programs and Level of Participation by Students

- 88.0% of Centers were operated by schools
- Hours open most frequently ranged between six and 15 hours per week (69.7% of centers)
- Largely staffed by certified teachers
- 25,238 students enrolled in 2012- 2013
- 41.0% of all students attended regularly in 2012- 2013 (defined as 30 days or more)

Question #1: Nature of the Programs and Level of Participation by Students

- Enrollment and attendance were greatest for students in **Grades 3-8**. In general, percentages of high school students continued to rise, while percentages of elementary and middle school students returned to levels reported in 2010-2011.
- **56.7%** of students were classified as “economically disadvantaged”
- **41.5%** students identified as White
- **37.0%** of students identified as African-American

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

Question 2 Objective 1 & 2: Increase student achievement in reading/language arts and mathematics

- Two types of **statistical** analyses were conducted on the 2011-2012 data by subject (reading/language arts and mathematics)
 - Analysis 1: Proficiency Level Comparison of Matched Treatment vs. Control
 - Analysis 2: SOL Only Comparison of Matched Treatment vs. Control
- Compared Treatment vs. Control Students
 - Treatment: Attended 21st CCLC for **30 or more days**
 - Control: **Eligible** to attend, but had **zero days of attendance**

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

Question 2 Objective 1 & 2: Increase student achievement in reading/language arts and mathematics

- **Analysis 1: Proficiency Level Matched Treatment and Control**
 - Used both 2010-2011 and 2011-2012 proficiency level scores
 - Based on all available test data (including SOL, VAAP, VMAST, and VGLA)
 - Proficiency level analyses permit the inclusion of student 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 1 & 2: Increase student achievement in reading/language arts and mathematics

- **Analysis 2: SOL Only Matched Treatment and Control**
 - **Only** those who took the **SOL** in both 2010-2011 and 2011-2012.
 - SOL scaled scores converted to standardized scores (**z-scores**)
 - Standardizing allowed different grade levels and years to be **combined**
 - Designed to detect more incremental changes in achievement
 - Does not include alternative assessments (no impacts for IEP or ELL)

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

Question 2 Objective 1 & 2: Increase student achievement in reading/language arts and mathematics

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

Subgroup	Proficiency (Analysis 1)	SOL Scaled Scores (Analysis 2)
IEP Status	√	
LEP Status	√	
Economically Disadvantaged Status	√	√

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

Question 2 Objective 1 & 2: Increase student achievement in reading/language arts and mathematics

- One-to-one matching process for the 3rd-8th grade **statistical** analyses only
 - Each treatment student paired with a control student
 - Propensity scores summarize how similar control students are to treatment students
 - Matched-samples comparison approach 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).

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

Variables Used in the Calculation of Propensity Scores

Prior Year (2010-11)

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

Current Year (2011-12)

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. District
10. School

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

Question 2 Objective 1 & 2: Increase student achievement in reading/language arts and mathematics

- **Separate Grade 3 Descriptive Analyses**
 - No prior-year test data available for most third-grade students
 - Used **proficiency levels on SOL, VAAP, VMAST, and VGLA** (based on the percentage scoring Proficient or Advanced) and **mean (i.e., average) scaled scores on SOL** for both reading language arts and mathematics
 - Compared (1) 21st CCLC participants and eligible non-participants and (2) 21st CCLC participants and all Commonwealth third-grade students

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

- Results from 2011-2012 statistical analyses for Grades 3-8
 - Obtained using two-level Hierarchical Linear Models and Hierarchical Generalized Linear Models.
 - Effect sizes were also calculated

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

Question 2 Objective 1: Increase student achievement in *reading/language arts*

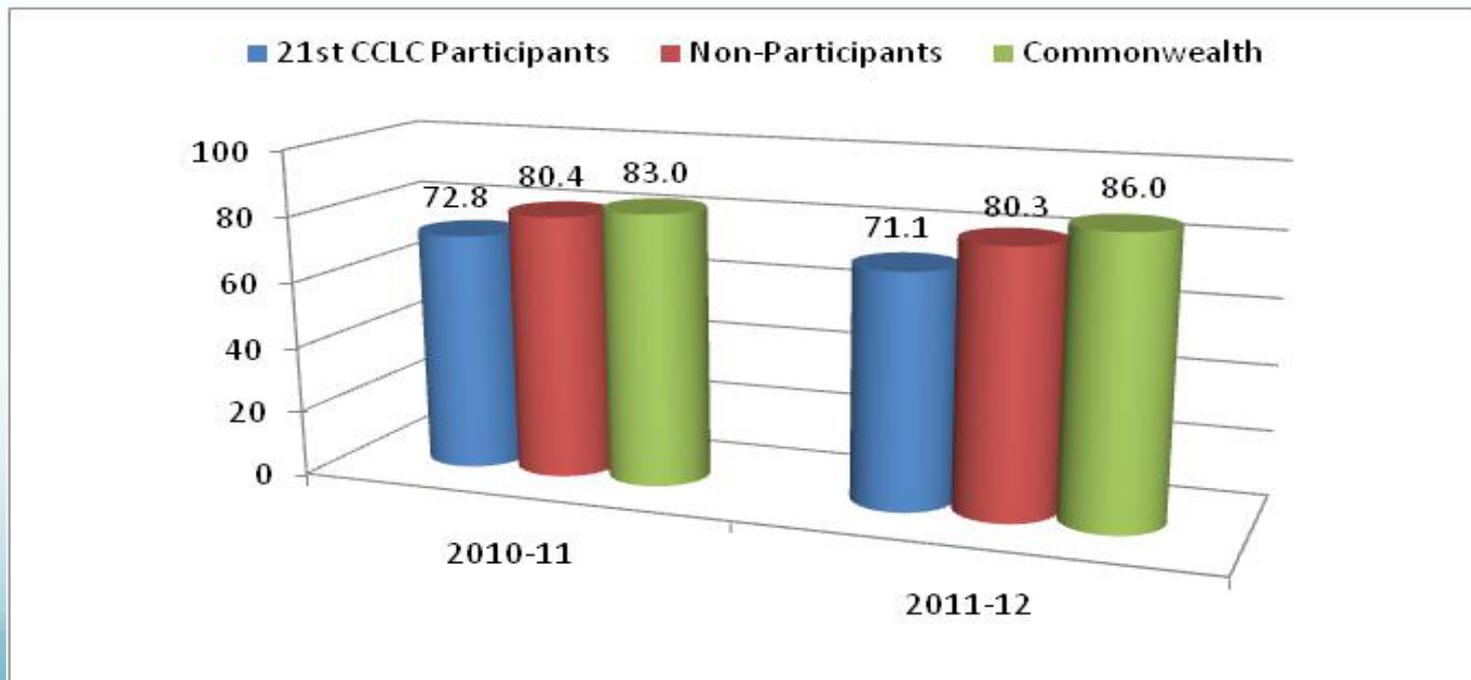
- 21st CCLC Students Attending at Least 30 Days vs. Controls (Eligible but with Zero Days Attended)

Predictor	Proficiency	SOL Scaled Score
Group (21st CCLC or Control)	Non-significant	Non-significant
Group x IEP	Non-significant	
Group x LEP	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 1: Increase student achievement in *reading/language arts*

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



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

Question 2 Objective 1: Increase student achievement in *reading/language arts*

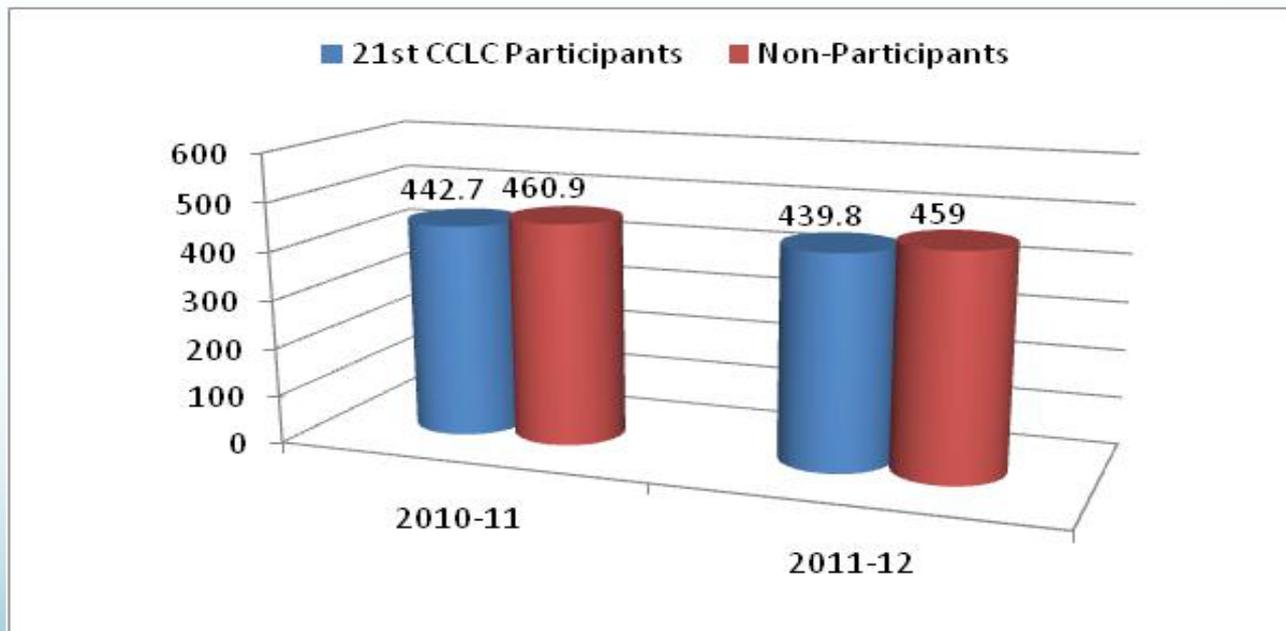
- 3rd Grade Reading/Language Arts Proficiency: By Subgroups

Subgroup	21st CCLC vs. Non-participants	21st CCLC vs. Commonwealth
Economically Disadvantaged	Non-participants	Commonwealth
IEP	21st CCLC	Commonwealth
LEP	Non-participants	Commonwealth

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

Question 2 Objective 1: Increase student achievement in *reading/language arts*

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



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

Question 2 Objective 1: Increase student achievement in *reading/language arts*

- 3rd Grade SOL Reading/Language Arts Scaled Scores: By Subgroups

Subgroup	21st CCLC vs. Non-participants
Economically Disadvantaged	Non-participants
IEP	21st CCLC
LEP	Non-participants

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

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

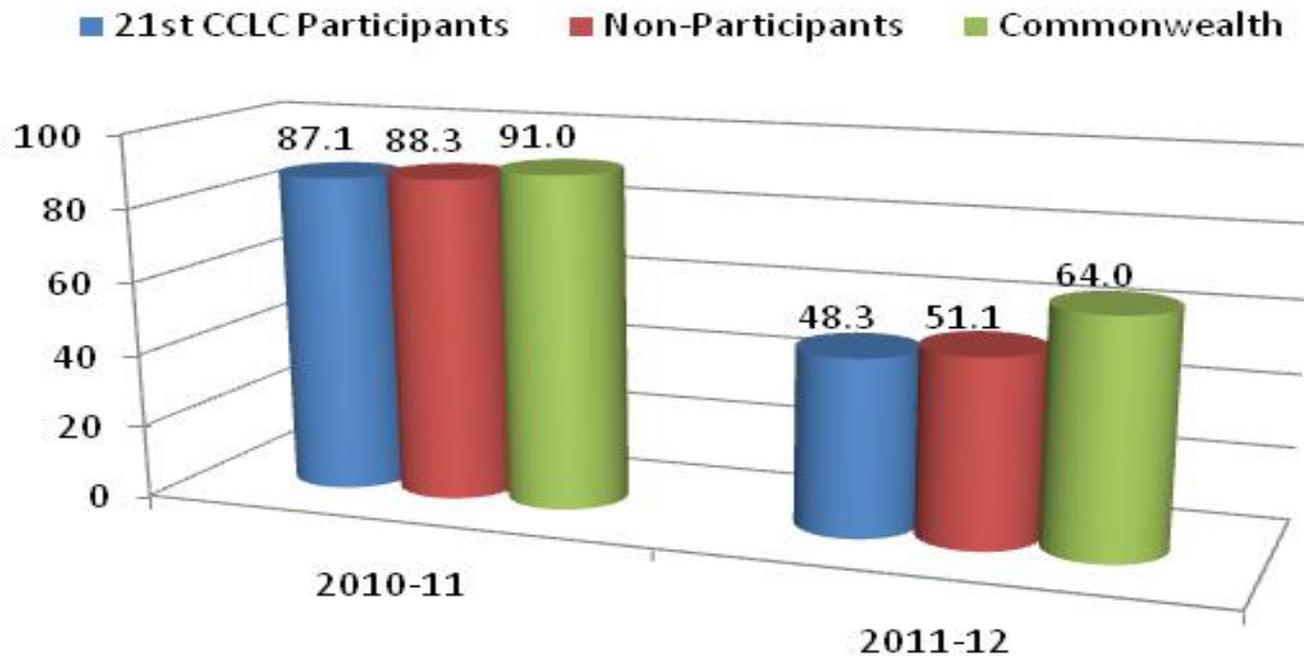
- 21st CCLC Students Attending at Least 30 Days vs. Controls (Eligible but with Zero Days Attended)

Predictor	Proficiency	SOL Scaled Score
Group (21st CCLC or Control)	Control	Non-significant
Group x IEP	21 st CCLC	
Group x LEP	21 st CCLC	
Group x Economically Disadvantaged	21 st CCLC	Non-significant

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

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

- 3rd Grade Mathematics Proficiency: All Students



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

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

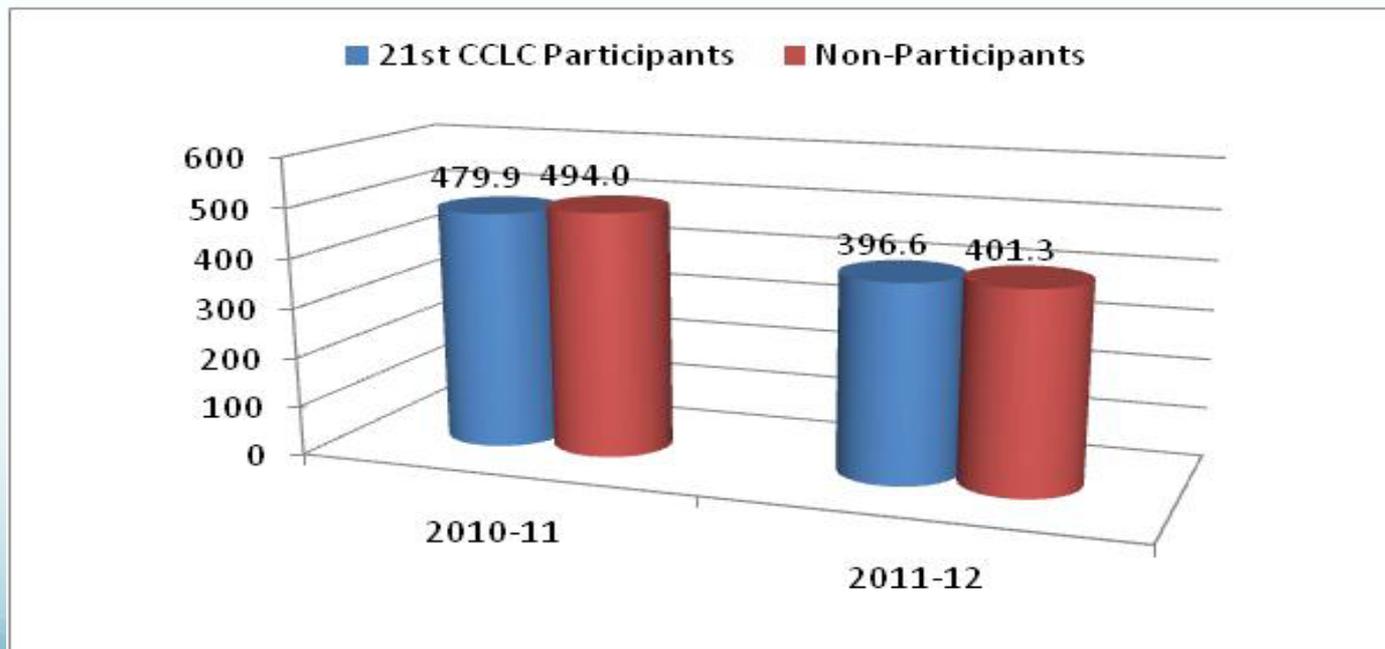
- 3rd Grade Mathematics Proficiency: By Subgroups

Subgroup	21st CCLC vs. Non-participants	21st CCLC vs. Commonwealth
Economically Disadvantaged	21st CCLC	Commonwealth
IEP	21st CCLC	Commonwealth
LEP	21st CCLC	Commonwealth

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

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

- 3rd Grade SOL Mathematics Scaled Scores: All Students



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

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

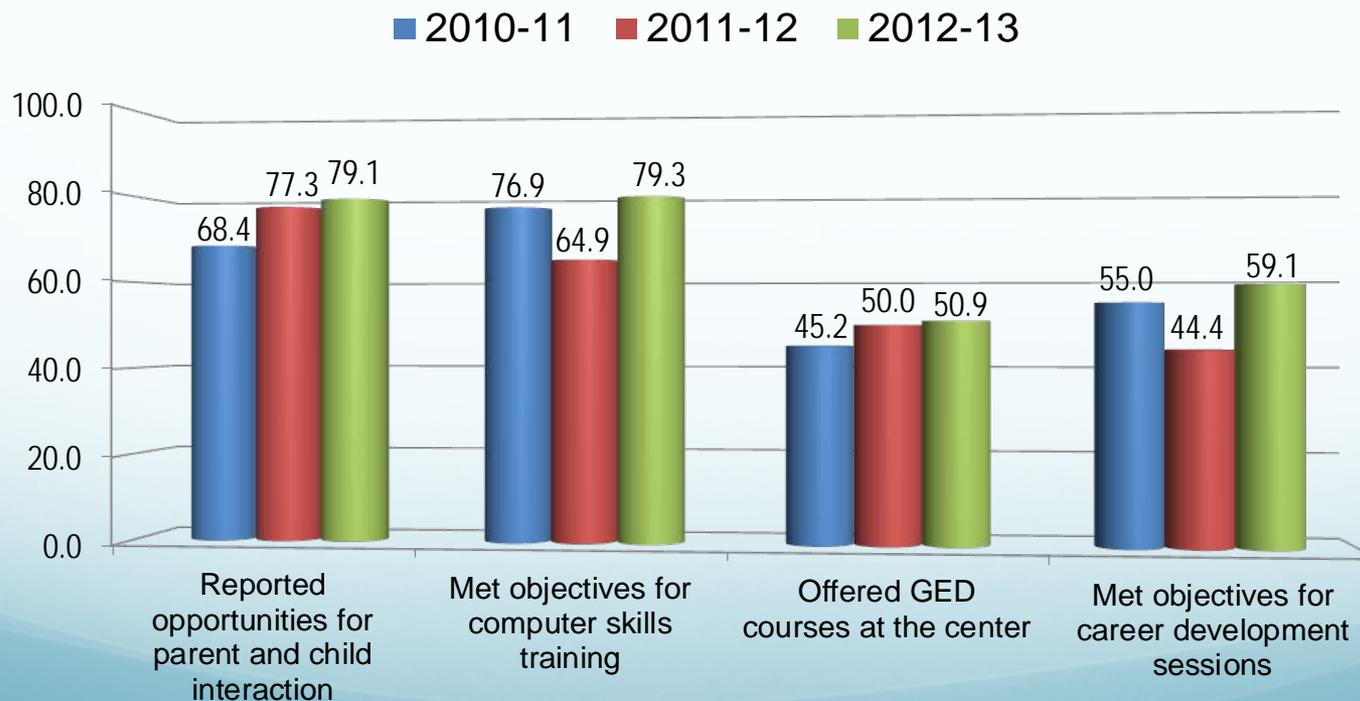
- 3rd Grade SOL Mathematics Scaled Scores: By Subgroups

Subgroup	21st CCLC vs. Non-participants
Economically Disadvantaged	21st CCLC
IEP	21st CCLC
LEP	21st CCLC

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

Question 2 Objective 3: Provide parent education

- Percentage of Centers that:



Question #3: In what ways do center level characteristics predict academic achievement?

- **Two types of statistical** analyses were conducted on the 2011-2012 data by subject (reading/language arts and mathematics)
 - Analysis 1: Proficiency Level analysis of 21st CCLC students
 - Analysis 2: SOL Only analysis of 21st CCLC students
- **Student inclusion criteria**
 - Attended 21st CCLC for **30 or more days**
 - Had two years (2010-11 and 2011-12) of achievement scores

Question #3: In what ways do center level characteristics predict academic achievement?

- Reading/Language Arts** Grades 3-8

Center Variable	Proficiency	SOL Scaled Score
Total Hours Open Per Week		
Number of Paid School-Day Teachers	Each paid school-day teacher added results in a 2% increase in the odds of scoring proficient	Each paid school-day teacher added results in a .005 increase in standardized scaled scores
Total Hours of Activities		
Total Number of Activities		
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: In what ways do center level characteristics predict academic achievement?

- **Mathematics** Grades 3-8

Center Variable	Proficiency	SOL Scaled Score
Total Hours Open Per Week	Each additional hour the center was open was associated with a 1% increase in the odds of scoring proficient	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 2% increase in the odds of scoring proficient.	
Total Hours of Activities		
Total Number of Activities		
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 #4: What “promising practices” and challenges were identified by centers regarding achievement and required objectives?

Summary of Promising Practices by Objective

Theme	Objective				
	Improve Student Achievement	Provide Parent Education	Improve Student Behavior	Provide Enrichment Opportunities	Improve Community Partnerships
The nature of student activities that were most effective in supporting grant objective attainment	Yellow	Blue	Orange	Yellow	
The types of student activities that were most effective in supporting grant objective attainment	Yellow		Orange	Yellow	
Building and sustaining strong relationships with families through services and communications	Blue	Yellow	Blue	Blue	Blue
Cultivating and maintaining strong relationships and partnerships with community members	Blue		Blue	Blue	Yellow
Incorporating incentives, positive reinforcement, or student input to promote desired student behavior	Orange		Yellow	Blue	Blue
Supporting high-quality after-school staff that maintains strong linkages with the school-day staff and curricula.	Yellow	Blue	Orange	Orange	

Yellow denotes the majority of themes across the dataset for the objective.

Orange denotes a small proportion of themes across the dataset for the objective.

Blue denotes a minimal proportion of themes across the dataset for the objective.

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

Summary of Challenges by Objective

Theme	Objective				
	Improve Student Achievement	Provide Parent Education	Improve Student Behavior	Provide Enrichment Opportunities	Improve Community Partnerships
Program design, structure, and grant-level characteristics.	Orange	Orange	Orange	Yellow	Blue
School environment and program operating conditions	Yellow	Blue	Orange		
Home and community characteristics and challenges.	Orange	Yellow	Orange		Blue
Parents' individual challenges		Yellow			
Students' individual challenges	Yellow		Orange		
Cultivating strong community connections		Blue			Yellow
Supporting quality after-school staff	Blue	Blue	Orange		Blue

Yellow denotes the majority of themes across the dataset for the objective.

Orange denotes a small proportion of themes across the dataset for the objective.

Blue denotes a minimal proportion of themes across the dataset for the objective.

Conclusions



Conclusions

- Results indicate centers are implementing the 21st CCLC program in accordance with Federal purposes and guidelines.
- Participation in the 21st CCLC programs was not a statistically significant positive predictor of 2011-12 reading or mathematics achievement in grades 3-8.
- Third-grade grade 21st CCLC participants in 2011-12 were outperformed by non-participants and the Commonwealth in reading and mathematics proficiency. Third-grade grade 21st CCLC participants also had lower SOL mean reading and mathematics scaled scores than non-participants.
- Centers offered a variety of programs and incentives aimed at increasing parental education and involvement.
- Increased numbers of paid school-day staff **positively** impacted student reading achievement scores as well as mathematics proficiency in 2011-12.
- An increase in the number of hours a center was open had a **positive** impact on mathematics achievement scores in 2011-12.

Conclusions

- Grantees who met objectives cited numerous promising practices regarding the achievement of their objectives.
- Grantees who did not meet objectives identified key challenges associated with the lower results.

Looking Ahead

2012-13 State Objectives

- 1) Improve student academic achievement in reading/language arts
- 2) Improve student academic achievement in mathematics
- 3) Provide opportunities for parental education

2013-14 State Objectives

- 1) Improve student academic achievement in reading/language arts and mathematics
- 2) Increase engagement in opportunities for literacy and related educational development
- 3) Improvement in core course grades and regular school attendance

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

Questions?



Technical Questions

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