

21ST CENTURY SUMMARY REPORT

Prepared for Council Bluffs Community School
District

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In the following report, Hanover Research summarizes findings across three reports that examine the impact of the 21st Century program.



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21ST CENTURY SUMMARY REPORT

INTRODUCTION

As a recipient of the 21st Century Community Learning Centers grant in 2014, Council Bluffs Community School District (Council Bluffs) implemented the Developing Relationships Engaging All Middle Schoolers (CB DREAMS) program for middle school students. The program represents a collaborative effort between the district, area businesses, and community partners to provide these students with high-quality before- and after-school activities. This document describes the district's efforts to evaluate and improve the 21st Century program.

On behalf of Council Bluffs, Hanover Research has prepared a series of reports examining the quality and impact of the 21st Century program. This document summarizes findings across three reports:

- **Best Practices in Before- and After-School Programs** reviews the literature on before- and after-school programs and considers best practices for participation, content, and assessment. The report further examines how the program at Council Bluffs Community School District aligns with these best practices.
- **2014-2015 Before- and After-School Programs Analysis** presents a summary of results from the 2014-2015 student, parent, teacher, and staff Before/After School Program surveys.
- **CB DREAMS Program Evaluation Data Analysis** evaluates the correlation between program participation and student academic outcomes, namely, assessment scores, disciplinary incidents, and attendance.

To identify trends across these reports and to provide evaluative feedback that aligns with reporting requirements for the Iowa 21st Century Community Learning Centers Program grantees, this document describes program participation, achievement of objectives, and opportunities for development. The conclusion of this document also includes a condensed performance summary. The appendix includes methodological notes for the data analysis and survey conducted as part of this research agenda.

PARTICIPATION

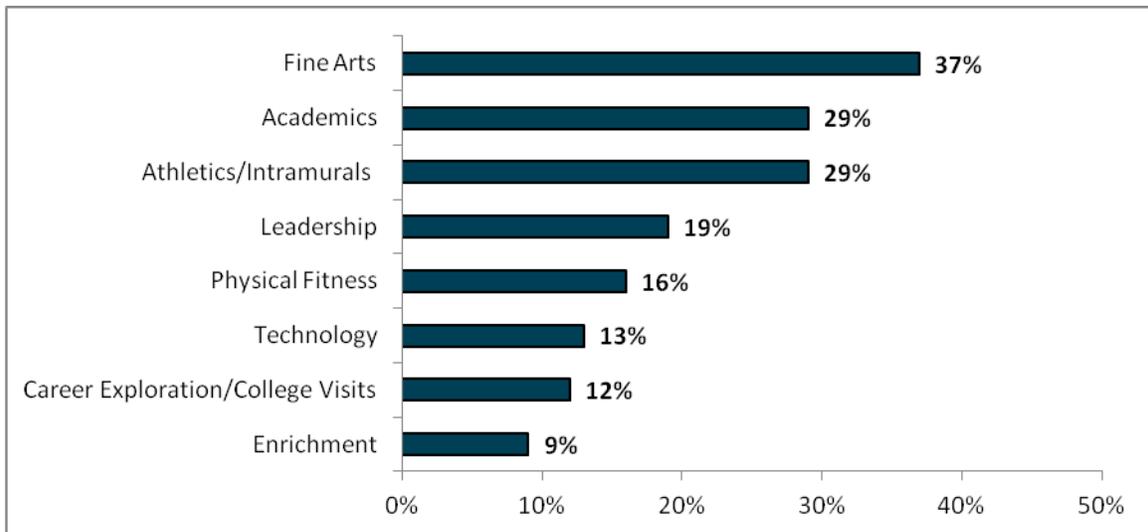
The 21st Century program provides opportunities outside of school to approximately 1,400 students in Grades 6 through 8 at two Council Bluffs middle schools: Kirn Middle School and Wilson Middle School. The program comprises 14 hours of programming per week before and after school, as well as “clinics, camps, and academics” over the summer.¹ 21st Century students have the opportunity to participate in a range of activities, but survey responses

¹ Stewart, S. “Council Bluffs Community School District Grant: Middle Schools Receive \$900,000.” The Daily Nonpareil, April 11, 2014. http://www.nonpareilonline.com/news/local/council-bluffs-community-school-district-grant-middle-schools-receive/article_cb35f782-c11f-11e3-97ec-001a4bcf887a.html

suggest that students are most involved in fine arts (37%), academic (29%), and athletic (29%) programs (Figure 1).

In addition to student-oriented before- and after-school activities, the 21st Century program actively promotes family involvement, offering family events as often as once or twice a week on evenings and weekends.² Family events, offered at each school, include wellness events and a job seekers series at a local community college.³

Figure 1: In which types of Before/After School activities did you most recently participate?



N=652; Totals may be greater than 100% because students were allowed to choose more than one response.

EVALUATION OF OBJECTIVES

Council Bluffs has promoted three primary objectives for the 21st Century program:⁴

- Improving reading and math scores on the Iowa Assessments or district tests,
- Promoting higher attendance, and
- Fostering increases in hope, engagement, and sense of well-being.

The following subsections examine program outcomes according to each of these goals.

ACADEMIC ACHIEVEMENT

To examine the impact of before- and after-school programs on academic achievement, Hanover Research relied in part on assessment data from the Iowa Assessment (IA) and the Scholastic Reading Inventory (SRI) for the school years 2013-2014 and 2014-2015. This data analysis revealed that the effect of program participation on assessment outcomes is weak.

² Ibid.

³ "Family Engagement." Council Bluffs Community School District. <http://www.cb-schools.org/parents-students/student-support/before-after-school-care/middle-school/cb-dreams-program/family-engagement/>

⁴ Stewart, S. "Council Bluffs Community School District Grant: Middle Schools Receive \$900,000," Op. cit.

After controlling for the effects of various student characteristics, the impact of 10 additional days of program participation does not exceed two scaled score points (positive or negative) or 1.4 percentage points (positive or negative) for students in any grade for any of the assessments (Figure 2).

Figure 2: Proficiency Levels, Pooled (Marginal Effects)

STATISTIC	IA MATH	IA READ	SRI
Additional 10 Days of Program	0.005	0.003	0.008**
Standard Error	(0.003)	(0.003)	(0.003)
Observations	1,299	1,299	1,242

*** p<0.01, ** p<0.05, * p<0.1

Hanover conducted these analyses separately for each grade in order to determine whether students from different grades might respond differently to the program. Although there are some statistically significant results that vary by grade, none of the differences for a 10-day increase in program participation is greater than two scaled points. After accounting for the control variables, there are no substantial differences between students who take an additional 10 days of the program and those who do not, regardless of grade (Figure 3).

Figure 3: Scaled Scores by Grade

STATISTIC	GRADE 6			GRADE 7			GRADE 8		
	IA Math	IA Read	SRI	IA Math	IA Read	SRI	IA Math	IA Read	SRI
Additional 10 Days of Program	0.554***	0.239	1.703	0.047	0.313	1.223	-0.081	-0.933**	-1.269
Standard Error	(0.200)	(0.306)	(1.540)	(0.281)	(0.340)	(2.452)	(0.373)	(0.465)	(2.445)
Observations	487	487	476	448	448	421	364	364	345

*** p<0.01, ** p<0.05, * p<0.1, Robust standard errors in parentheses

As with the scaled score outcomes by grade, the differences in proficiency outcomes between students who participate in the program for an additional 10 days and those who do not are very small (Figure 4).

Figure 4: Proficiency Levels by Grade

STATISTIC	GRADE 6			GRADE 7			GRADE 8		
	IA Math	IA Read	SRI	IA Math	IA Read	SRI	IA Math	IA Read	SRI
Additional 10 Days of Program	0.009**	0.006	0.008**	-0.004	0.006	0.010*	0.001	-0.014*	-0.005
Standard Error	(0.004)	(0.005)	(0.004)	(0.005)	(0.006)	(0.006)	(0.008)	(0.008)	(0.009)
Observations	481	481	470	440	440	414	361	361	342

*** p<0.01, ** p<0.05, * p<0.1

Please note that although some of these results are statistically significant, Hanover Research cautions against claims of program effects on assessment outcomes due to the small magnitudes and inconsistency of the effects.

Teacher survey responses suggest a more substantial impact on academic outcomes. Of students who were deemed to need improvement,⁵ teachers indicate that these students improved most in class participation (37%), completing homework to teachers’ satisfaction (34%), and academic performance (32%) (Figure 5).

Figure 5: To what extent has your student changed their behavior in terms of...

	IMPROVE*	NO CHANGE	DECLINE**	DID NOT NEED TO IMPROVE
Participating in class	37%	12%	7%	44%
Completing homework to your satisfaction	34%	14%	9%	44%
Academic performance	32%	13%	9%	46%

N=485-486

*Calculated by adding the percentage of respondents who selected “slight improvement,” “moderate improvement,” and “significant improvement.”

**Calculated by adding the percentage of respondents who selected “slight decline,” “moderate decline,” and “significant decline.”

BEHAVIORAL OUTCOMES

To assess the impact of program participation on student behavior, Hanover Research examined data on disciplinary incidents and school attendance. This analysis suggests that additional program participation is somewhat correlated with improved behavioral outcomes. After controlling for student characteristics, we found that an additional 10 days of program participation correlates with a 0.2 percentage point increase in attendance rates and 0.08 fewer disciplinary incidents (Figure 6).

Figure 6: Behavioral Outcomes, Pooled

STATISTIC	ATTENDANCE	DISCIPLINE
Additional 10 Days of Program	0.002***	-0.080**
Standard Error	(0.000)	(0.036)
Observations	1,304	1,304

*** p<0.01, ** p<0.05, * p<0.1, Robust standard errors in parentheses

In every grade, additional program participation correlates somewhat positively with attendance and somewhat negatively with disciplinary incidents. Most of the results are statistically significant, but all the effects are small. For attendance, the greatest program effect is for Grade 8 students, for whom an additional 10 days of program participation correlates with a 0.3 percentage point higher in attendance rates. A student who participates for an additional 20 days might therefore be expected to increase his/her

⁵ Identified by adding the percentage of respondents who selected “slight improvement,” “moderate improvement,” and “significant improvement.”

attendance by one school day over the year, a small difference. For Grade 7 students, the effect is only 0.1 percentage points, but this result remains statistically significant.

For discipline outcomes, the program effect is strongest for Grade 7 students, for whom an additional 10 days of program participation correlates with 0.11 fewer disciplinary incidents. For the Grade 6 and Grade 8 students, the results are somewhat smaller and not statistically significant, but program participation continues to exhibit a negative correlation (i.e., fewer disciplinary incidents) with disciplinary incidents for students in these grades (Figure 7). Although the effects are not large, the findings in this section constitute some evidence that program participation is associated with slightly better student behavioral outcomes.⁶

Figure 7: Behavioral Outcomes by Grade

STATISTIC	GRADE 6		GRADE 7		GRADE 8	
	ATTENDANCE	DISCIPLINE	ATTENDANCE	DISCIPLINE	ATTENDANCE	DISCIPLINE
Additional 10 Days of Program	0.002***	-0.071	0.001*	-0.109**	0.003***	-0.034
Standard Error	(0.000)	(0.047)	(0.000)	(0.055)	(0.001)	(0.124)
Observations	487	487	448	448	364	364

*** p<0.01, ** p<0.05, * p<0.1, Robust standard errors in parentheses

Results from the teacher survey also suggest positive outcomes related to student behavior. Notably, a substantial portion of teachers reported improvements in the extent to which students get along with others (31%), turn in homework on time (30%), remain attentive in class (29%), and behave in class (27%) (Figure 8).

Figure 8: To what extent has your student changed their behavior in terms of...

	IMPROVE*	NO CHANGE	DECLINE**	DID NOT NEED TO IMPROVE
Getting along well with other students	31%	12%	8%	50%
Turning in his/her homework on time	30%	14%	9%	46%
Volunteering	30%	23%	5%	42%
Being attentive in class	29%	13%	11%	47%
Behaving well in class	27%	11%	11%	51%
Coming to school motivated to learn	27%	14%	9%	49%
Attending class regularly	22%	13%	4%	62%

N=485-486

*Calculated by adding the percentage of respondents who selected “slight improvement,” “moderate improvement,” and “significant improvement.”

**Calculated by adding the percentage of respondents who selected “slight decline,” “moderate decline,” and “significant decline.”

⁶ Please also note that the absence of outcome data in the pre-program period results in Hanover not controlling for pre-program student behavioral outcomes. As such, we caution that these behavioral differences may not be direct effects of the program. Additionally, because school attendance may be necessary for program attendance for some students, the correlation between days of program participation and the attendance rate may simply reflect the similarity of these two measures.

HOPEFULNESS AND ENGAGEMENT

Survey feedback from students and parents reveal strong feelings that before- and after-school programming has positively affected student hopefulness about the future (over 80%) and interest in continued participation in before- and after-school activities (roughly 90%). In addition, student and parent responses indicated similarly strong feelings that the program had allowed students to use their strengths (roughly 90%) (Figure 9).

Figure 9: Please indicate your agreement with the following statements...

	STUDENTS*	PARENTS*
Participating in the before/after school activities has made me more hopeful about my future.	83%	88%
The before/after school activities gave me the chance to use my strengths.	89%	92%
I would like to participate in more before/after school activities.	89%	91%

N=506-547 students; 225-275 parents

*Calculated by adding the percentage of respondents who selected “agree” or “strongly agree.”

OPPORTUNITIES FOR DEVELOPMENT

On the basis of the survey, data analysis, and literature review conducted as part of this evaluation study, Hanover Research identified room for growth in the degree to which 21st Century impacts student academic outcomes. The literature review informing this evaluation suggests several ways in which the program may improve in this dimension:

- **Grow program attendance.** Researchers with the Harvard Family Research Project (HFRP) note that a number of studies have concluded that students “experience greater gains across a wide variety of outcomes if they participate [in before- and after-school programs] with greater frequency (more days per week) in a more sustained manner (over a number of years).”⁷
- **Increase program staff.** Although research does not establish an unequivocally optimal student to staff ratio for before- and after-school programs, evidence generally suggests that programs with lower ratios have better outcomes than programs with proportionally fewer staff members.⁸ The Iowa Afterschool Alliance (IAA), which “supports high quality programs that serve students through structured, hands-on programming that engages them in learning and positive activities,”⁹ advises an adult to youth ratio for after-school programs between 1:10

⁷ Little, P., C. Wimer, and H. Weiss. “After School Programs in the 21st Century: Their Potential and What It Takes to Achieve It.” Harvard Family Research Project, February 2008. p. 6. <http://www.hfrp.org/publications-resources/browse-our-publications/after-school-programs-in-the-21st-century-their-potential-and-what-it-takes-to-achieve-it>

⁸ Rhodes, J. “Researcher Corner: The Critical Ingredient in Afterschool Programs.” National Mentoring Partnership, 2005. p. 2. http://www.mentoring.org/downloads/mentoring_1311.pdf

⁹ “About the Iowa Afterschool Alliance.” Iowa Afterschool Alliance. <http://www.iowaafterschoolalliance.org/about-the-iaa/>

and 1:15 for children ages six and older.¹⁰ Other organizations, likewise, cite research that recommends a maximum staff to student ratio of 1:15.¹¹

- **Offer additional professional development for program staff.** According to HFRP, “one of the most critical features of high-quality programs [...] is the quality of a program’s staff.”¹² The IAA recommends that all program staff have training in youth development, group leadership, activity planning, and community outreach, as well as one or more years of experience.¹³
- **Promote greater alignment between the school curriculum and the before- and after-school programs.** A guide published with support from the Charles C. Mott Foundation, *Academic Content: After-School Style*, recommends that instructors in before- and after-school programs familiarize themselves with the school curriculum in order to connect schoolwork with academic content in extracurricular programs. The guide suggests that the comparatively informal nature of after-school programs enables after-school teachers to incorporate concepts from multiple academic subjects into lessons and activities.¹⁴

PERFORMANCE SUMMARY

The 21st Century program has had a substantial impact on the students served by Council Bluffs’ two middle schools. First, the program has had a broad reach, serving roughly 1,400 students in the 2014-2015 academic year. Second, the program has impacted student behavior and engagement: stakeholders report that the district’s before- and after-school programs have improved students’ sense of hope for the future and disciplinary records and teacher reports suggest that attendance, discipline, and classroom behavior have also improved among program participants.

However, Council Bluffs has set ambitious goals for 21st Century, and the district’s proactive approach to evaluating the program has revealed multiple ways to strengthen student outcomes, particularly as they relate to academic achievement. Greater support for program staff and efforts to bolster student attendance may be meaningful starting points to further develop this program.

¹⁰ “Iowa Afterschool Alliance Standard Categories and Corresponding Indicators of Quality Afterschool Programs.” Iowa Afterschool Alliance, September 2008. p. 1.
http://www.iowaafterschoolalliance.org/documents/cms/docs/quality/IAA_2009_Standard_Categories_01_21_ejb.pdf

¹¹ [1] Beighle, A., M.W. Beets, H.E. Erwin, J. Huberty, J.B. Moore, and M. Stellino. “Promoting physical activity in afterschool programs.” *Afterschool Matters*, 2010, p. 27.
http://www.niost.org/pdf/afterschoolmatters/asm_2010_11_june/asm_2010_11_june-4.pdf

[2] “Safe Havens: B&GCA, Girls, Inc. & YMCA.” American Youth Policy Forum, p. 99.
<http://www.aypf.org/publications/compendium/C2S34.pdf>

[3] “What first steps do I need to take to establish a good afterschool program?” WNET.
<http://www.thirteen.org/edonline/concept2class/afterschool/exploration.html>

¹² Little, Wimer, and Weiss, Op. cit., p. 7.

¹³ “Iowa Afterschool Alliance Standard Categories and Corresponding Indicators of Quality Afterschool Programs,” Op. cit., p. 6.

¹⁴ Weisburd, C. “Academic Content: After-School Style.” Foundations, Inc., 2003. pp 2-4.
http://www.nccap.net/media/pages/Foundations%20ACAS_HandBook1.pdf

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4401 Wilson Boulevard, Suite 400

Arlington, VA 22203

P 202.559.0500 F 866.808.6585

www.hanoverresearch.com