

Activity Types and Frequent Attendance in Michigan 21st Century Community Learning Centers Linked to Improved Academic Performance

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Michigan 21st Century Community Learning Centers (MI 21st CCLC) served diverse groups of primarily low-income and low-performing students.

Michigan 21st CCLC afterschool programs provide academic learning and enrichment activities such as sports, arts, youth development, technology, and health/nutrition education for youth who often do not have access to such experiences¹. In 2013-2014, 29,297 youth participated in 313 program sites across 40 Michigan 21st CCLC grantees, 83% of whom qualified for free/reduced price lunch and were academically low performing. Enrollment was evenly distributed across gender, and a third were students who attended the previous year. Figures 1 and 2 illustrate other important demographics of participants.

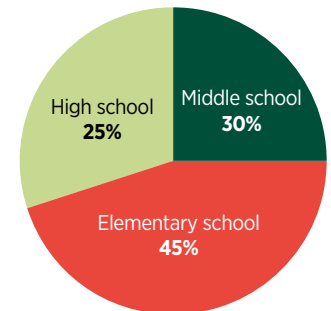


FIGURE 1
Participants' Grade Levels

Program participation was related to improved academic performance.

The data showed that program participation was related to improved academic outcomes, and participation in different types of activities related to different outcomes. This is true even after controlling for student and program characteristics that may be related to academic performance. Table 1 lists the outcomes and summarizes the results associated with total days of attendance, participation in different types of activities, and threshold effects. For the definition of activity types and offerings, please see Table 2.

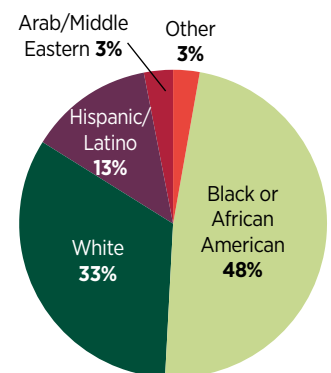


FIGURE 2
Participants' Racial/
Ethnic Backgrounds

| TABLE 1 ASSOCIATIONS BETWEEN MI 21ST CCLC PROGRAM ATTENDANCE AND ACADEMIC PERFORMANCE | | | | |
|---|-----------------------------|---|--------------------|---|
| Outcomes | | Better Results With More Total Days of Attendance | Threshold Effects* | Better Results With More Attendance in Different Activity Types** |
| Grade improvements | Reading | | 90 days | Academic enrichment |
| | Math | ✓ | 20 days | STEM |
| Teacher report improvements | Homework completion | ✓ | 40 days | — |
| | School behavior | ✓ | 40 days | Arts |
| School records | Percent of attendance | ✓ | 20 days | STEM Academics both traditional and academic enrichment |
| | Days of suspension | ✓ | 20 days | Academics academic enrichment |
| Student reports | Curriculum connection | ✓ | 20 days | Academics traditional academics |
| | Help with academic subjects | ✓ | 20 days | Academics |
| | School commitment | ✓ | 40 days | — |
| Parent reports | Curriculum connection | | — | STEM Traditional academics |
| | Help with academic subjects | | — | |
| | School commitment | | — | STEM Traditional academics |

NOTE: "—" means no association. Students (site) sample size: grades: 16, 326 (250); teacher survey: 10, 354 (263); student survey: 7,037 (258); parent survey: 5,592 (257)

* The threshold effect means the minimal days of attendance needed for demonstrating statistically significant benefits.

Because teacher surveys were administered for students with at least 30 days of program attendance, finding suggested students with 30-39 days of attendance had poorer teacher ratings than those who participated 40+ days.

** Major activity categories are in bold. Academic effects were examined by academics (the major category for all academic participation) and by two sub-categories (traditional and enrichment) to be specific. STEM is an acronym for Science, Technology, Engineering and Math education.

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Important findings and implications

- Students with **more total days of attendance** regardless of which activities they participated in showed better results in all areas except reading grades and parent evaluations.
- A minimum of **20-40 days participation** is needed to show significant benefits.
- Consistent with the literature, improving students' literacy skills/reading grades may be difficult²; data suggested participation in project-based or embedded **academic enrichment** activities seemed to be most effective in improving reading grades.
- Improved math grades and school attendance were related to participation in **STEM activities**.
- Parent evaluations of academic benefits were only related to **STEM** and **traditional academic** participation, no matter how many days overall their child attended the programs.
- Participation in **academic activities** was related to several desirable outcomes: better school attendance, fewer suspensions, and students' perceptions of program academic benefits.
- However, traditional academic and academic enrichment activities seemed to benefit students differently. Specifically:
 - **Academic enrichment** activities, but not traditional academics, were related to improved reading grades and fewer days of suspensions;
 - **Traditional academics**, but not academic enrichment activities, were linked with students' and parents' evaluation of how the program connects to the school curriculum, as well as parents' belief of how the program strengthens the child's school commitment.



TABLE 2 PERCENTAGE OF MI 21ST CCLC PROGRAMS THAT OFFERED THESE ACTIVITIES

| | |
|---------------------------------|---|
| 100% Academics | Academic-focused activities, including: 74% traditional academics - Direct instruction in academic skills (homework help, tutoring, lessons, exam preparation, credit recover) 85% academic enrichment - Project-based or embedded learning in which academic skills are taught indirectly (e.g., math instruction embedded within cooking) |
| 87% Sports | Team- and non-team sports, dance and physical education |
| 85% Recreation | Physical free play (e.g., recess, open gym), games (e.g., checkers or card games) and social events |
| 90% Arts | Music, painting, and crafts |
| 91% Youth development | Prevention, social emotional learning, and leadership |
| 95% STEM | Science, technology (e.g., learning to use computer programs, media or video production), engineering, and math |
| 33% Health and nutrition | Health awareness, nutrition and food |

For more information about the Michigan 21st CCLC program evaluation or a copy of the full 2013-2014 Annual Report, please go to cerc.msu.edu/21cclc/reports.aspx or contact Jamie Wu at wuhengch@msu.edu or at the address or phone number below.

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1. Halpern, R. (2000). The promise of after-school programs for low-income children. *Early Childhood Research Quarterly*, 15(2), 185-214.
 2. Leal, D., Johanson, G., Toth, A., & Huang, C.-C. (2004). Increasing at-risk students' literacy skills: Fostering success for children and their preservice reading endorsement tutors. *Reading Improvement*, 41(1), 51-72.