

How Afterschool Programs in Iowa make a difference for kids- Vic Jaras

The 21st Century Community Learning Centers programs in Iowa are making a big difference in the lives of at-risk children by improving attendance, behavior and academics. This work prioritizes at-risk children who have not been successful to help reconnect them with the importance of learning.

We provide reading and math help through targeted support sessions, enrichment based learning and educational field trips. This program has significant gains in reading and math through a whole child focus, supporting the developmental, emotional and nutritional needs of the children. The US Department of Education Annual Performance Report (APR) data shows that in Iowa on average, 66% of students improved in reading and 75% improved in Math (USDOE Overview of the 21st CCLC Annual Performance Data, 2017). When you consider that many of our staff are community volunteers and most programs have a blend of certified teachers and support staff, these results are impressive.

The secret ingredient in the Iowa programs is the recruiting of community partners and people who deeply care about kids. Together, they exhibit a willingness to address the key issues that affect the whole child and frequently interrupt the learning process.

Below are some key areas where Iowa afterschool programs have made a big difference for children. While schools often provide breakfast and a hot lunch, afterschool programs provide a snack or full meal along with additional support for school work, tutoring and social emotional learning topped with engaging enrichment activities that are key ingredients in a recipe for effective whole child instruction.



Nutrition and learning

There is a growing body of research that has documented the symbiotic relationship between proper diet and brain development and learning. If eating is foundational for learning and we know that our at-risk children have the highest percentage of food insufficiency, then it is reasonable to predict that insuring nutritionally sound meals at school may have a positive impact on learning. Good Nutrition is a key building block for child development and can affect health, cognitive ability and behavior.

“There is pretty solid evidence that children who are hungry are not able to focus, so they have a low attention span, behavioral issues, discipline issues in the school” (Hoxworth, 2018).

“Many studies have highlighted a link between diet and behavior. Hannaford suggests that poor nutrition increases the stress on our physical and psychological systems which can lead to poor behavior” Nicola (2019) .

*“Sixteen million US children (21%) live in households without consistent access to adequate food. After multiple risk factors are considered, **children who live in households that are food insecure, even at the***

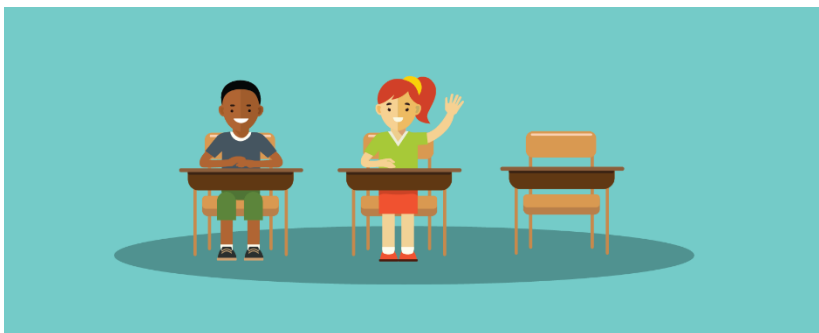
lowest levels, are likely to be sick more often, recover from illness more slowly, and be hospitalized more frequently. Lack of adequate healthy food can impair a child's ability to concentrate and perform well in school and is linked to higher levels of behavioral and emotional problems from preschool through adolescence" (Council on Community Pediatrics and Committee on Nutrition (2015).

All of our programs are required by federal statute to provide a healthy snack. Many of our programs go above and beyond this requirement to provide a full meal to hungry children. Some programs participate in a backpack program with the Food Bank of Iowa that offers a backpack filled with food to go home on the weekend.

One of the most popular enrichment activities in afterschool is cooking club, where food insufficient children learn how to prepare healthy foods and get to sample what they learn to cook. Some programs partner with Hyvee Grocery Dieticians to teach children about healthy food choices. All of these strategies help children, provide additional nutrition for their development and contribute to meeting the needs of the whole child.

In Iowa, meeting the needs of our children is always a priority.

Attendance



Attendance is critical to the long-term success of a child in school. When we start an afterschool program, one common result is an increase in attendance for the children in the program.

During a site visit meeting, the building principal typically reports an increase in attendance for the children in the afterschool program. Simply by attending school on a regular basis, kids receive more instruction and support during the day in addition to support provided in the afterschool program.

Children generally improve their attendance because of their participation in an afterschool program.

Attendance Works (2011) reported that research shows that good afterschool programs can not only improve academic performance but also influence school-day attendance, even when most don't appear to make it an intentional goal. They accomplish this by:

- Providing socialization and peer attention in a supervised venue.
- Re-establishing the link between effort and results—first in a non-school activity.
- Engaging students in challenging activities that help them develop persistence, a trait critical to later success in school and life.
- Providing consistent contact with caring, stable adults. Increasing the sense of belonging at school

“Improving attendance is an essential strategy for reducing achievement gaps. State and national data shows that students from low-income families are more likely to be chronically absent than their peers” (Ginsburg, et al., 2014).”

A 2009 study of students at Boys & Girls Club for 30 months found that those attending afterschool programs skipped school fewer times, increased school effort and gained academic confidence. (Arbreton, et al., 2009)

[In Iowa, The Boys and Girls Clubs generally provide full meals and enjoy very high levels of attendance.](#)

The Harvard Family Research Project (2008) stated: “...does Participation in after school Programs make a difference? YES!

“A decade of research and evaluation studies, as well as large-scale, rigorously conducted syntheses of many research and evaluation studies, confirms that children and youth who participate in after school programs can reap a host of positive academic, social, prevention, and health benefits “

Harvard found three critical factors that define a successful afterschool program.

- 1) Sustained participation in programs. Many studies and research syntheses conclude that youth experience greater gains across a wide variety of outcomes if they participate in after school pro-grams with greater frequency and in a more sustained manner. Sustained participation can be cultivated in a number of ways, such as by tailoring programs to youth interests, needs, and schedules, as well as pro-viding a wide variety of enriching opportunities for youth to be exposed to new ideas, new challenges, and new people.

In Iowa, we require 60 hours a month of participation (3 hours a day X 5 days a week) to insure a sustained, research-based outreach to at-risk children.

- 2) Quality programming. Emerging research on after school program quality and its relationship to out-comes indicates that, in addition to ensuring adequate physical and psychological safety and effective management practices, quality after school programs also share the following features: appropriate supervision and structure; well-prepared staff; intentional programming with opportunities for autonomy and choice; and strong partnerships among the various settings in which program participants spend their day—that is, schools, after school programs, and families.

In Iowa, we provide ongoing monthly professional development, we maintain a community of practice and we hold several regional meetings and an annual state conference to provide training in quality best practices through our contract with the Iowa Afterschool Alliance.

- 3) Strong partnerships. Programs are more likely to exhibit high quality when they effectively develop, utilize, and leverage partnerships with a variety of stakeholders, especially families, schools, and communities.

In Iowa, we lead the nation in the number of community partners, with almost 800 partnerships around the state and growing. Our partners provide new real-world experiences for children, social-emotional learning and help engage children with hands on activities. Our list of partners is online in a searchable database (<https://www.iowa21cclc.com/21cclc-partners-2018>).

Another reason why afterschool programs are so important in Iowa, is because of the support they provide to working families. Adults are more productive at work when they know their children are being cared for in a safe place until they are done working for the day. Interviews with thousands of parents over the past nine years provide evidence that this program is critical for families.

Iowa ranks first in the nation in the percent of children under 6 years of age with 75.6 percent of all parents in the labor force (French, et al., 2012).

Working families and businesses also derive benefits from afterschool programs which ensure that youth have a safe place to go while parents are at work. **Parents concerned about their children's afterschool care miss an average of eight days of work per year, and this decreased worker productivity costs businesses up to \$300 billion annually** (Barnett & Gareis, 2004; Catalyst, 2006).

Afterschool programs have huge economic benefits for children, parents, employers and the community. To fully comprehend the value of afterschool programs, we need to combine all the areas affected, rather than viewing a single item in isolation.

Behavior

When a 21st Century Community Learning Center afterschool program starts in a school, one of the results is fewer referrals to the office for behavior. It is typical to see decreases in referrals averaging 50% according to Principal interviews during site visits. A strong, well-organized program maintains this trend during the life of the grant.



Our programs make the learning fun and engaging for youth and the result is a very high level of participation. This can have long term effects on a child's educational outcomes like re-engaging in the school day classes and preventing the emotional despair that leads to dropping out of school.

Structured programs help children learn how to interact with others, develop positive relationships and contribute to reducing bad behavior and youth crime outside of school.



One of the most often overlooked benefits of afterschool programs is a reduction in youth crime that we must consider to fully gauge the impact of afterschool programs in the community. There is a causal relationship between afterschool programs and reducing youth violence.

For example, in Council Bluffs CSD, Middle School afterschool programs reduced youth arrests by 51%.

In Sioux City, the Police Department reported a 37% reduction in youth crime after three Middle School programs started.

Longitudinal data from the US Justice Department shows that when afterschool programs were given \$1 billion dollars and charged with academic improvement goals, youth crime went down 30% nationally and stayed down for the past 18 years. The further decline could be an economic multiplier effect of afterschool programs and the engagement of youth.

Newman et al. (2000) stressed that after-school programs can reduce juvenile crime and violence, reduce substance abuse, reduce teen sex and pregnancies, and boost academic success and school completion. After-school programs are beneficial to student resiliency and the prevention of juvenile delinquency in three critical ways.

Research shows that the rates for both violent juvenile crimes and victimization of juveniles peak between 3 and 6 p.m. on school days (Newman et al., 2000; Richardson et al. 1993; Bilchick, 1999).

In addition, school-based interventions can increase students' feelings of attachment to school and provide them with skills needed to avoid delinquent behaviors (Greenwood et al., 1998). According to DeKalb (1999), after-school programs can also reduce student truancy, which is a key predictor of juvenile delinquency.

After-school programs provide experiences that may benefit students' social skills and classroom conduct.

Children who participate in these programs tend to exhibit better behavior in school and higher academic achievement, better social skills and self-control and improved self-confidence through the development of positive relationships with adults and peers (Scott-Little et al. 2002).

Students can also benefit from the extra-curricular activities that many after-school programs offer.

According to the Carolina Longitudinal Study (Cairns & Cairns, 1994), extracurricular activity participation is associated with low rates of early school drop-out (Mahoney & Cairns, 1997) and low rates of criminal arrest in young adulthood (Mahoney, 2000). Cassell et al. (2000) posited that heavy extracurricular involvement helps to dissuade students from becoming involved with delinquency.

Finally, after-school programs may help improve academic achievement (Fashola & Slavin, 1998). Students who participate in these programs often are more positive about school and their own schoolwork, and are more likely to have ambitions to graduate from high school and attend college (Chung, 2000).

In summary, results indicate that **after-school programs are potentially a powerful resource that can help reduce juvenile delinquency rates**. Quality after-school programs such as LA's BEST teach students the academic and social skills they need to avoid the anti-school behaviors and attitudes that contribute to juvenile delinquency (Goldschmidt, et al., 2007).

Over the past 20 years, Iceland went from having the highest rate of teen alcohol use (42%) to the lowest (5%) in Europe. This trend was reversed by providing afterschool programs across the country to engage youth with activities and education. It worked. (CBC Radio, 2018).

Investing in Children

We spend \$28 billion to keep kids (under 18) locked up each year, but only \$1 billion to prevent youth crime with afterschool and summer school programs. Which is the most effective use of taxpayer dollars (Justice Policy Institute).

Combine this understanding with the loss in productivity costing employers \$300 billion a year, and we can see that the expansion of afterschool programs makes sound economic sense for schools, communities, states and our nation.

Parents concerned about their children's afterschool care miss an average of eight days of work per year, and this decreased worker productivity costs businesses up to \$300 billion annually (Barnet & Gareis, 2004).

Dr. James Heckman, an economics professor at the University of Chicago and winner of a Nobel Prize in Economics, has written extensively on the need to increase funding to programs that support children as the most cost effective for society. In fact, Professor Heckman has data to show that for every dollar invested in a program for child development, the return on investment is \$13. What is the return on investment for programs that incarcerate kids?

"If society intervenes early enough, it can improve cognitive and social emotional abilities and the health of disadvantaged children" (Heckman, 2008).

Investing in children is a fiscally responsible use of resources at every level. Children are the future and the more we feed, care for and education our children, the better our communities will be tomorrow.



Reading - Reading and literacy are vital to the future success of all children. Every day, we find instructions and guidance in print. Teaching children to develop functional literacy is a priority for afterschool programs in Iowa.

The Iowa 21st Century Community Learning Centers programs are required to provide 60 hours of contact time per month and a minimum of 30 days of summer school (if they operate a summer program). This dedication of time and effort has resulted in Iowa programs playing a critical role for reading improvement in children.

Kids who are behind in fourth grade are four times more likely to drop out of high school (Hernandez, 2012).

Students struggling in reading as 8th graders only have a 10% chance of catching up Source: ACT research on early reading (Dougherty, 2013).

Poor kids who are behind in fourth grade are 13 times more likely to not graduate from high school on time (Hernandez, 2012).

Kids who drop out of high school are twice as likely to abuse drugs, five times more likely to be involved in gangs and five times more likely to go to prison (Pioneer Press, 2010).

Iowa afterschool programs serving at risk children provide reading support through sight words, vocabulary building and other literacy strategies that are vital for children who in many cases have a history of chronic absenteeism.

Sight words are an important foundation for reading instruction. 1,000 sight words represent 90% of ALL printed and web material (Hinzman & Reed, 2018)

*“Students' **vocabulary** knowledge is directly linked to their success in **school**. Not only is **vocabulary** an important part of reading comprehension, but knowing what **words** mean also allows students to make connections between previously learned information (background knowledge) and new information”* (Marzano, 2020)

A disturbing long-term trend is the decline in children reading for pleasure. This has implications in the development of functional literacy in children and teens. In 1980, 60 percent of 12th graders said they read a book, newspaper or magazine every day that wasn't assigned for school. By 2016, only 16 percent did – a huge drop, even though the book, newspaper or magazine could be one read on a digital device (Twenge, 2018).

We encourage programs to invite local authors of children's books into the school to talk with kids about writing, how their characters were developed and to promote reading as a means of discovery and an outlet for emotions. The state library of Iowa maintains a database of Iowa authors who will visit schools at <https://www.iowacenterforthebook.org/authors>. Our afterschool programs have made substantial progress with reading improvement. We provide professional development, workshops and resources throughout the year to support reading for at-risk children.



Math

Afterschool programs in Iowa have embraced Chess clubs as a math remediation strategy. We have limited time after our focus on reading. However, by using a game-based learning strategy, we can provide an activity that children can practice at home.

There is growing research that provides evidence of chess helping children with math through development of math related thinking skills. While it is not the traditional worksheet approach, Chess provides intensive problem-solving, probability and computational thinking through game-based learning. Playing Chess provides practice with several Math standards and teaches children to think things through before they act. Children enjoy playing Chess and it provides a fun way to practice “what if” analysis, which is a key skill for computational thinking in Computer Science.

Below are a few Common Core Math standards that are developed through playing chess.

ALG.1: Understand patterns, relations, and functions

ALG.2: Represent and analyze mathematical situations and structures using algebraic symbols

GEO.1: Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships

GEO.2: Specify locations and describe spatial relationships using coordinate geometry and other representational systems

Chess is a low-cost way to provide a STEM activity in the form of a game.

Berkman (2004) explicitly discusses the link between chess and mathematics and argues that chess promotes higher-order thinking skills, and that the analysis of chess positions has much in common with problem solving in mathematics. It works with concepts as correlation, it uses the coordinate system, geometric concepts such as rows and columns (called ranks and files in chess), diagonals and orthogonals and it requires continuous calculation. It also develops visual memory, attention span (concentration), spatial reasoning skills, capacity to predict and anticipate consequences, critical thinking, self-confidence, self-respect and problem-solving skills (see also [33–34]). A recent meta-analysis conducted by Sala and Gobet (2015) suggested that skills acquired through chess instructions do indeed transfer to academic domains. The authors reviewed 24 studies with 2788 young people in chess conditions and 2433 controls.

Hungary has added Chess in the national curriculum because of the thinking skills it promotes (Chess News, 2013).

In Bulgaria, Chess is a required subject in the high school curriculum (DW Akademie, 2011).

On June the 27 **Polish** Minister of Education Anna Zalewska has officially announced, that from September 1, 2017 **chess** will be in each **Polish elementary** school in the first class and will be used by pupils as an important tool for learning (European Chess Union, 2016).

This addition to the curriculum has already paid off for Poland. They saw a huge increase in their PISA scores and now have passed the US and have one of the highest scores in Europe (Prończuk, 2019).

Chess also provides social emotional learning for children. This is documented by a film called Brooklyn Castle that shows inner city children in New York who gained confidence, self-esteem and developed a passion for learning by playing chess (Dellamaggiore, 2012).

In Iowa, all of the Des Moines elementary afterschool programs have chess clubs and they have an annual event where at-risk children, many with a history of referrals, sit quietly for two hours and play chess against other schools.

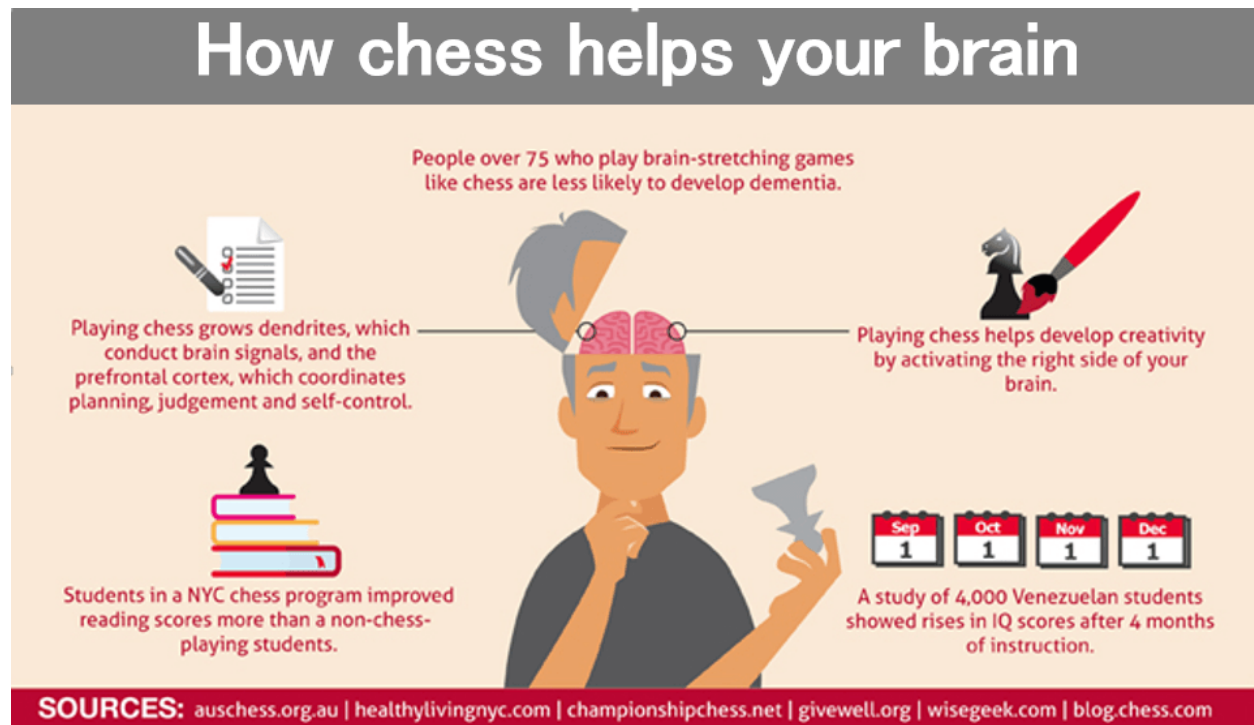
Research that playing chess helps young minds is growing. The results are greater for at-risk children.

The authors reviewed 24 studies with 2788 young people *in chess* conditions *and* 2433 controls, *and* found *a moderate effect of chess-based instruction on overall cognitive and academic ability* ($g = 0.34$).

The *results* further indicated that the effect size for *mathematics* ($g = 0.38$) was larger than for reading ($g = 0.25$) (Rosholm, et al., 2017).

How chess helps your brain

People over 75 who play brain-stretching games like chess are less likely to develop dementia.



Playing chess grows dendrites, which conduct brain signals, and the prefrontal cortex, which coordinates planning, judgement and self-control.

Playing chess helps develop creativity by activating the right side of your brain.

Students in a NYC chess program improved reading scores more than a non-chess-playing students.

A study of 4,000 Venezuelan students showed rises in IQ scores after 4 months of instruction.

SOURCES: auschess.org.au | healthylivingnyc.com | championshipchess.net | givewell.org | wisegeek.com | blog.chess.com

From: <http://gardinerchess.com.au/wp-content/uploads/2015/01/Chess-Helps-brain.png>

Afterschool programs provide children with hope for their future. Our programs transform little lives with encouragement, social and emotional support and the discovery that they can be successful learners and make a difference in their community.

