



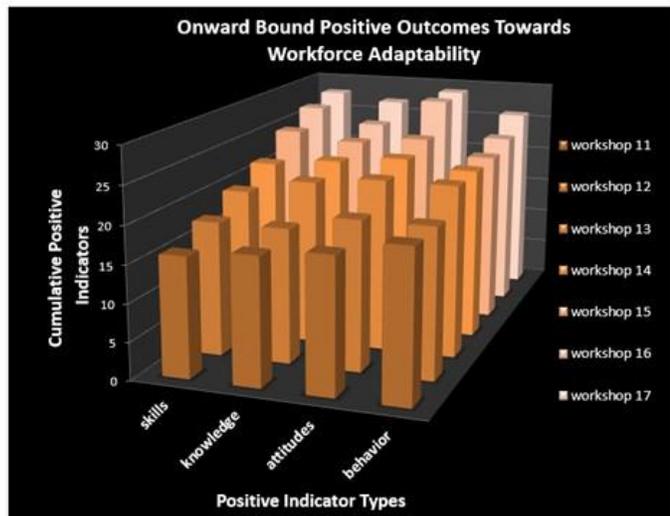
## ...Opportunity Youth Stepping Toward Workforce Readiness / Adaptability...

**Evaluations:** Onward Bound (OB) workshops generate positive verbal and behavioral indicators (enthusiasm data) which we garner from 12 student inmates at the Hennepin County Juvenile Detention Center. Indicators do make a difference in four positive, transformational outcomes towards the objective of adaptability/readiness into the manufacturing workforce. 90% of our students gain:

- Key points of discovery (concepts gained by students that were not known before): what 3D-CADD mechanical design is, how it is used in manufacturing, "My design is ready for rapid prototyping (3D printing)!"
- Words of engagement from participants, such as "super, sweet, awesome.": "This is so cool; I didn't know how to draw before." "This is so easy." Students in the class give full attention during workshop.
- Collaborate and gain tech tips---for example things that will stick, take with them to remember. "An idea can quickly be generated in CADD." "A CADD model is used to create drawings (shape, size, dimension)." My part drawing can be used in an assembly!"
- Language used by engineers and scientists such as entities, splines, finite elements, flow analysis. "Sorry for my foul language, I want to start talking like an engineer".
- Goal setting: exploring careers in manufacturing: drafter, welder, machinist, technician, engineer. "I want to improve my HS grade average from D's to A's and go into tech school."

We classify the indicators into outcomes of improved skills, attitudes, knowledge, and behavior. The data is charted over time and posted on web as the Onward Bound 3.5 hour after school workshops continue once per quarter.

**Investment Return:** We conduct the workshops according Minnesota Department of Corrections policies. Corroborating MinnDOC research strongly suggests programs such as OB reduces recidivism and probation violations by at least 29%. Average one inmate incarceration cost per day in detention is \$241. Probation violations average \$11,000 per incident. It is safe to say that OB costs are \$500 per student inmate. Average cost of a life in prison is \$2.1M in today's dollars. On a more positive note, a Rose Institute Study on the costs and benefits of The After School and Education Safety Act of 2002 found that a dollar invested in after school programming such as OB for an at-risk youth brings a return of \$8.92 to \$12.90. Gaining an inside track to a rewarding career with lifetime personal income and infusion into the US economy is good for everyone.



**Outlook:** In collaboration with major Twin City firms and foundations, we bring huge activity of today's manufacturing and construction business directly into the detention facility classroom by employing state of the art Solidworks, 3D Auto CADD and MIG welding hands on experience. With help from Minneapolis K-12 and key non-profits, students are informed about how to attain basic tech school credentials. By accessing home, school, or library computers, students are given take home instructions and encouraged to download a free Auto 3D CADD app to preoccupy having fun with their artistic talents in design of items as a welcome home name plate, door hinge, or anything imaginable. We are driven to multiply and compound efforts to condition and inspire students toward innovation, problem solving, and advanced and systematic thinking. We look forward to further evidence of successful workshops by sharing positive indicators and outcomes from youth whose lives are on the brink and seeking change.