

# National Overview of the Effectiveness of Cognition Programs on Increasing Educational Outcomes and Reducing Recidivism

The Cognition Curriculum used in this report, is solely marketed by Positive Solutions Associates Inc., and has been used in criminal justice, traditional and correctional educational settings across the United States since 1993. The program employs a unique approach for teaching criminal offenders the skills that are commonly referred to as cognitive restructuring and/or criminal thinking errors. The curricula is based on the research that has been conducted in the area of at-risk and alternative education since 1979.

The research into the effectiveness of this curricula has been conducted in three different areas, namely: 1) Recidivism, 2) Intervention Outcome, 3). Standard (Academic) Test Scores. By testing in these three distinct areas, it is easy to ascertain whether the program has the ability to help individuals change their behavior and how they feel about themselves, the world, and the people around them. It also shows whether the program has the ability to enable offenders to master new skills that will help them personally, academically and vocationally. Finally, it allows us to determine if the acquisition of these skills helps the offender refrain from subsequent criminal activity.

Executive summaries of the research only are presented in this document. Additional information and contacts are available upon request. Please send all inquires through [www.thinkright.com](http://www.thinkright.com)

## **Recidivism**

### **MISSOURI:**

The State of Missouri, Department of Corrections, just finished a three-year longitudinal study of the Cognitive Skills Curriculum, operated under the name of "Positive Solutions," on over 2000 probation and parolees. An equal-sized control group was also followed during the same period. The new offense rate for the control group remained constant at between 15 and 20 percent over the entire period. The test group had a new offense rate of 2 percent over the first two years. During the third year, the rate was 5.6 percent.

**UTAH:** The State of Utah, Department of Corrections has a recidivism rate that runs at approximately 50 percent, for all offenders in their system, after 12 months. After thirty-six months, the rate climbs to 70 percent. Offenders, who have participated in the Cognitive Skills Curriculum called "Cornerstone" as administered by Project Horizons, have been tracked for recidivism over the last few years. According to the latest statistics provided by Project Horizons, the 838 offenders who have participated in this curriculum have a recidivism rate that is only 26.5 percent.

# National Overview of the Effectiveness of the Cognition Programs on Increasing Educational Outcomes and Reducing Recidivism

## Intervention Outcome Measurement

**MARYLAND:** The Maryland Department of Corrections/Department of Education, Correctional Education Division conducted a pilot project using the Cognition Programs operating under the name of "Positive Solutions." Data were collected from offenders enrolled in the program, as well as a control sample. Of these individuals, 34 (27 PSA enrollees, seven control) completed both a pre-test and a post-test.

Four scores are calculated from the data: (1) Total, (2) Symptom Distress (SD) scale, (3) Interpersonal Relations (IR) scale, and (3) Social Roles (SR) scale. The SD scale is sensitive to outcomes associated with the most prevalent kinds of disorders identified by the National Institutes of Mental Health studies and the Diagnostic and Statistical Manual published by the American Psychological Association. This scale measures outcomes concerning a broad range of disorders including substance abuse. The scale does not attempt to diagnose individuals for disorders. The SD scale reports how well individuals function in relation to the database of other individuals who have completed the survey. The IR scale measures general satisfaction with, as well as problems in interpersonal relations. Research indicates that the quality of interpersonal relationships is essential in understanding both quality of life and well being in general. The SR scale measures a person's level of dissatisfaction, conflict, distress, and inadequacy in tasks related to their employment, family roles, and leisure life. Research suggests that the three scales (SD, IR, and SR) measured in this survey are strongly interrelated. These results indicate that the more satisfied individuals are with their SR and IR, they will experience lower levels of distress (SD) and their quality of life and well-being increase. The total score represents the overall quality of life and satisfaction for an individual. Lower scores on the OQ represent higher quality of life and level of satisfaction. In brief:

1. Symptom Distress (SD) measures how one feels about him/her self; it can be useful in identifying levels of stress, depression, and other psychological factors.
2. Interpersonal Relationships (IR) measures how ones feels about the important people in his/her life, including family, friends, and other significant relationships.
3. Social Role Functioning (SR) measures how one feels about his/her environment, including school, work, institutional life, etc.
4. Total score provides and overall measure of well being.

Analyses comparing pre-tests to post-tests showed **statistically significant positive changes** between pre-test and post-test scores for the program enrollees. Table 1 shows the averages for pre-test and post-test for the Positive Solutions enrollees, control and community non-offender samples. Averages are for Total and three (SD, IR, SR) scales scores (lower scores indicate improved functioning).

# National Overview of the Effectiveness of the Cognition Programs on Increasing Educational Outcomes and Reducing Recidivism

**Table 1**

Means (i.e. average score) for Individuals Enrolled in Cognitive Programs Taking Both Pre- and Post Tests, and for Control and Community (Non-offender) Groups

	Site 1		Site 2		Site 3		Total Sites		Control		Community (Non-Offender)
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	
Total	65.10	58.49	53.17	51.91	44.23	32.11	<b>56.37</b>	<b>50.92</b>	<b>50.94</b>	<b>56.33</b>	<b>45.19</b>
SD	35.39	31.40	26.23	25.28	21.69	16.91	<b>29.12</b>	<b>26.22</b>	<b>25.57</b>	<b>29.71</b>	<b>25.43</b>
IR	18.98	18.18	16.85	16.30	13.31	9.00	<b>17.06</b>	<b>15.71</b>	<b>16.23</b>	<b>16.28</b>	<b>10.20</b>
SR	10.73	8.91	10.09	10.33	9.23	6.20	<b>10.19</b>	<b>8.99</b>	<b>9.14</b>	<b>10.34</b>	<b>9.56</b>

Comparisons between pre-test and post-test scores showed significant positive changes for offenders enrolled in Cognitive Programs on Total and SD scores. Differences were noted on the other scales, however because of the small size of this pilot the statistical measurement is not significant. Comparisons among the three sites revealed no significant differences, indicating that all three sites reported the pattern of results. Comparisons between the cognitive enrollees and the control group showed no significant differences. However, it should be noted that this comparison may be spurious due to the low sample size of the control group.

## National Overview of the Effectiveness of the Cognition Programs on Increasing Educational Outcomes and Reducing Recidivism

Comparisons between the total Cognitive enrollees sample and a community (non-offender) sample revealed that the Cognitive program was effective helping to bring offender scores to normal ranges (i.e., lower scores to the levels of non-offenders) on the SD and SR scales, although the Total and IR scales were above normal levels.

Further analysis of the data revealed that positive changes were experienced by 70.4% of Cognitive enrollees on the Total score, 59.3% on the SD score, 63.0% on the IR score, and 59.3% on the SR score.

# National Overview of the Effectiveness of the Cognition Programs on Increasing Educational Outcomes and Reducing Recidivism

## Overall statistics for Missouri, Ohio, New Jersey, Iowa, and Utah

Table XX:

Mean on pre- and post-tests for overall sample, overall sample of people 18 years old and older, and overall sample under 18 years old.

	Overall			Overall (> 18 yrs)			Overall (< 18 yrs)		
	N	Pre	Post	N	Pre	Post	N	Pre	Post
Total	829	49.66	44.19 *	697	49.54	43.65 *	122	50.28	46.54 *
SD	829	27.26	23.41 *	697	27.41	23.15 *	122	26.30	24.69
IR	829	12.59	11.80 *	697	12.61	11.83 *	122	12.44	11.36 *
SR	829	9.81	8.98 *	697	9.52	8.67 *	122	11.54	10.49 *

Note: \* Indicates differences between pre- and post- are statistically significant. All differences (including non-significant differences) show decrease in scores (i.e., improved functioning).

Table XY:

Percent of sample experiencing positive changes due to PSA programs.

	Overall	Overall > 18 yrs	Overall < 18 yrs.
Total	63.4	63.8	61.5
SD	64.9	66.9	54.1
IR	52.4	52.1	53.3
SR	51.9	50.9	59.8

The results listed above indicate that individuals showed statistically significant improvement after having participated in Cognitive Programs, such that scores for PSA participants resemble those of control non-offenders. Total and sub-scale scores show that these individuals tended to show improvement in their life satisfaction, and well being. These results speak to the fact that Cognitive Programs addresses issues salient to the improvement in quality of life and well being of individuals who take the programs.

# National Overview of the Effectiveness of the Cognition Programs on Increasing Educational Outcomes and Reducing Recidivism

## Standard Academic Test Scores.

The cognitive approach used as the basis for the aforementioned programs has been used for many years in traditional and correctional educational settings to help students that have failed in traditional classrooms. The key to the success of this approach is that it alters the delivery of the curriculum to fit the learning needs of the majority of the at risk and criminal justice population that have not thrived well in previous educational environments.

In Iowa, over a three-year period, schools showed:

- Middle school Math proficiency skills increase from 65.7% to 97%.
- Middle school Technology skill's changed from 86% to 99%.
- Elementary schools Math proficiency increase from 40.5% to 56%.
- Elementary Technology scores increase from 36% to 64%.
- High schools Reading increases from 6% to 35%.
- High schools Math increases from 6% to 35%.
- High schools Science increases from 6% to 35%.

In Texas, schools showed:

- Passing reading scores rising from 85.4% the first year to 88.2% the second year and 90.5% the third year.
- Math over a two year period; beginning with 72.9% to 76.3% to 83.1%.
- Writing over a two year period; beginning scores of 65.4% to 72.6% to 80.4% in the third year.
- 7th grade reading in the African-American population increasing from 70% to 81%.
- Math scores in the same population rising from 54% to 70%.
- 6th grade Hispanic students' math scores rising from 75% to 87%.
- 7th grade from 61% to 79%.
- 8th grade from 58% to 76%.