



Background

In the 2011-2012 school year, COIL (Circle of Independent Learning) Charter School in Fremont, California provided BrainWare Safari (BWS) for a second year to some of its students. The implementation plan was the same as the first year: the students were to work on the program independently at home (as they do with other aspects of the curriculum). A 90-minute webinar/demonstration was held for the parents that would be working with BWS to explain the program and provide guidance on coaching their students during the experience.

BrainWare Safari Usage

The six COIL students consisted of five males and 1 female. In addition, two families each had two students that were part of the six using BWS. They started BrainWare Safari as early as 10-22-11 and continued to work beyond the time of the post-evaluation with the most recent login being 5-14-12. The students completed an average of 55 ± 28.7 sessions with a minimum of 38 and maximum of 113. They completed an average of 133 ± 25 levels with a minimum of 94 and maximum of 167.

Behavioral Rating Scale

Improvements in cognitive skills were measured using an online behavioral rating scale completed before and after using BrainWare Safari by the parents. The pre-evaluation was completed in November 2011 and the post-evaluation was completed for the 6 students in April 2012. The evaluation rates each student on a set of behaviors that reflect a student’s development, compared to peers, in specific cognitive processing areas, including various attention, memory, perceptual processing and thinking skills. Each area had six statements to evaluate; the behaviors are aggregated within each area and considered according to the scale in Table 1. The scale used for the pre-evaluation and post-evaluation are compared to determine the level of improvement, according to the scale in Table 2.

Table 1: Level of Skill

Number of Points	Level of Skill
26 to 30	High
21 to 25	Above Average
16 to 20	Average
11 to 15	Below Average
10 or under	Low

Table 2: Degree of Improvement

Points of Improvement	Ratings
12 or more	Excellent
7 to 11	Very Good
4 to 6	Good
1 to 3	Fair

The COIL students who used BrainWare Safari experienced increases in their cognitive abilities across the different areas rated on the evaluations, as shown in Table 3.

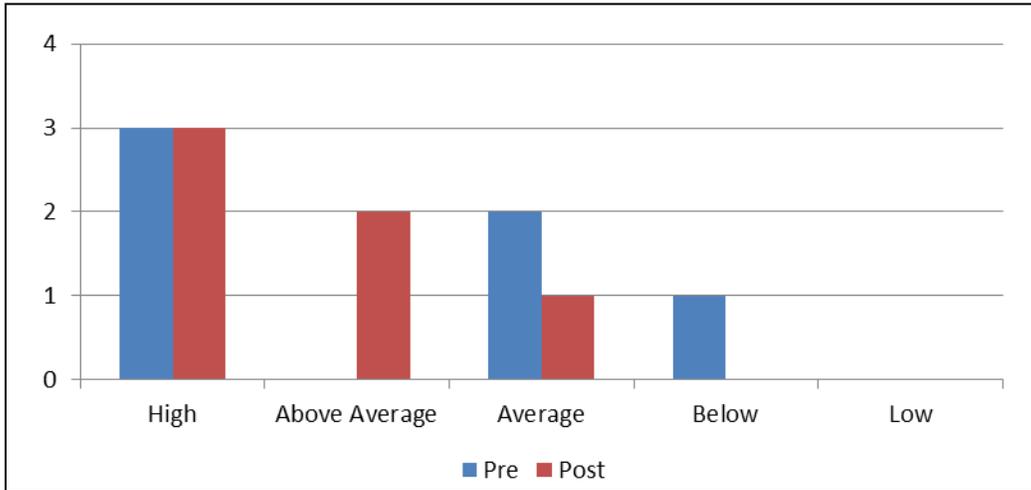
Table3: Students improving in each area

Cognitive Skill Area	Number improved	% improved
Memory Skills	6	100%
Perceptual Processing Skills	5	83%
Thinking Skills	5	83%
Attention Skills	4	67%

Memory Skills

6 students improved their memory skills according to the pre- and post- evaluations completed by their parents, as shown in Figure 1. On pre-evaluation 3 were rated with high, 2 with average and 1 with

Figure 1: Number of students at each ranking of memory skills, pre-& post-evaluation



below average degree of skill. On post-evaluation 3 were rated with high, 2 with above average and 1 with average degree of skill. Table 4 shows the degree of improvement that was noted in memory skills. There was one student with excellent improvement of 12 points, moving from below average to above average in memory.

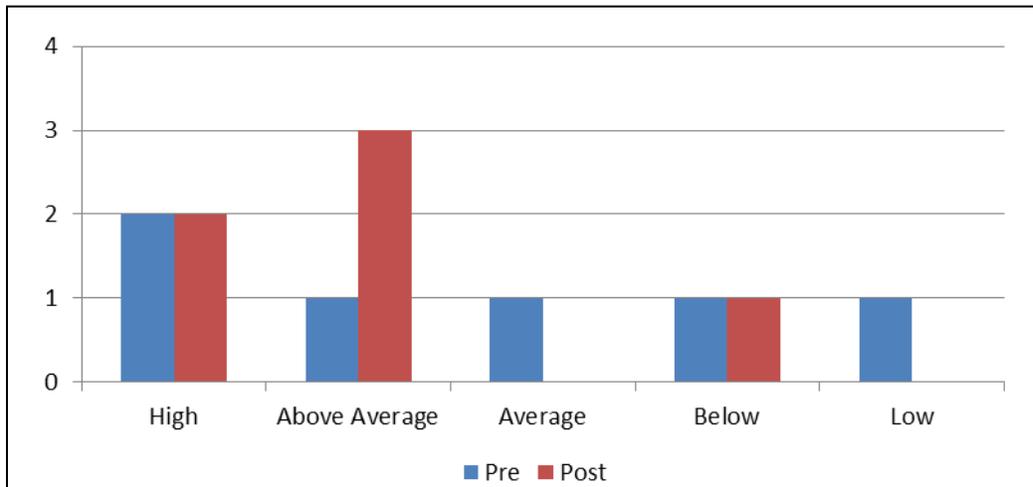
Table 4: Degree of Improvement: Memory Skills

Degree Improvement	Number
Excellent	1
Very Good	0
Good	1
Fair	4

Perceptual Processing Skills

5 students increased their perceptual processing skills according to the pre- and post- evaluations by their parents, as shown in Figure 2. On pre-evaluation 2 were

Figure 2: Number of students at each ranking of perceptual processing skills, pre- & post-evaluation



rated with high, 1 with above average, 1 with average, 1 with below average and 1 with low degree of skill. On post-evaluation, 2 were rated with high, 3 with above average and 1 with below average perceptual processing skills. Table 5 shows the degree of improvement noted in perceptual processing skills. Two students had a very good level of improvement of between 7 and 11 points. One of those moved from low to average skill, while the other moved from average to above average skill in perceptual processing.

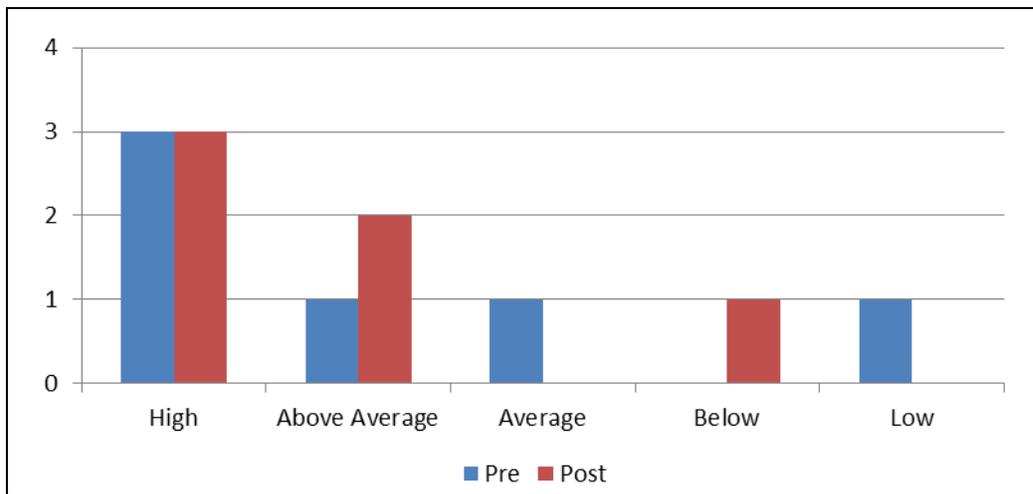
Table 5: Degree of Improvement: Perceptual Processing Skills

Degree Improvement	Number
Excellent	0
Very Good	2
Good	1
Fair	2

Thinking Skills

5 students increased in thinking skills, as rated on pre- and post-evaluation by their parents, as shown in Figure 3. On pre-evaluation 3 were rated with high, 1 with above average, 1 with average and 1 with low degree of skill. On post-evaluation 3 were rated with high, 2 with above average, and 1 with below

Figure 3: Number of students at each ranking of thinking skills, pre- & post-evaluation



average degree of skill. Table 6 shows the degree of improvement noted in thinking skills. One student had a very good level of improvement (between 7 and 11 points) and moved from low to below average thinking skill. One student had a good level of improvement (between 4 and 6 points) and moved from above average to high thinking skill.

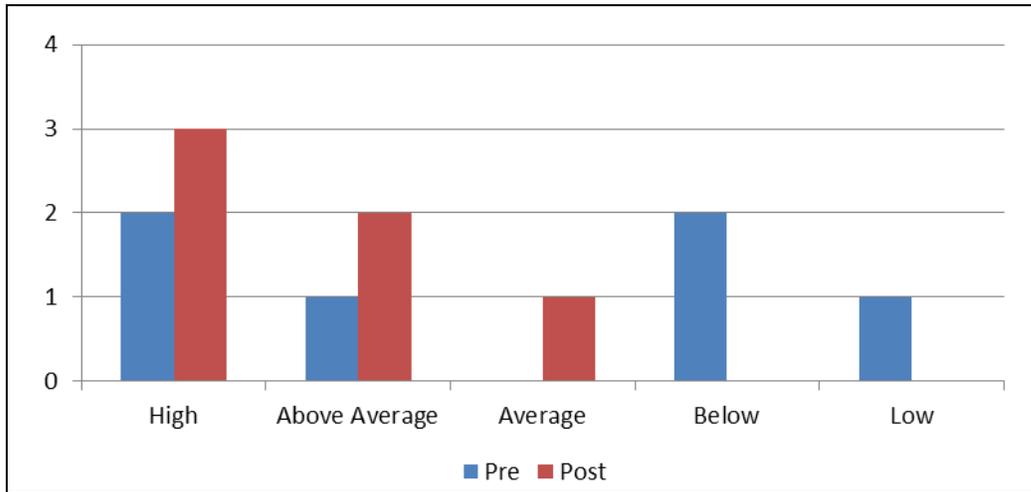
Table 6: Degree of Improvement: Thinking Skills

Degree Improvement	Number
Excellent	0
Very Good	1
Good	1
Fair	3

Attention Skills

4 students improved in attention skills, as rated on pre- and post-evaluation by their parents, as shown in Figure 4. On pre-evaluation 2 were rated with high, 1 with above average, 2 with below average and

Figure 4: Number of students at each ranking of attention skills, pre- & post-evaluation



1 with low degree of skill. On post-evaluation 3 were rated as high, 2 as above average, and 1 as average degree of skill. Table 7 shows the degree of improvement on attention skills for these students. Three students increased at a very good level, between 7 and 11 points on their attention skills. One of these students moved from low to average, while two moved from below average to above average attention skill.

Table 7: Degree of Improvement, Attention Skills

Degree Improvement	Number
Excellent	0
Very Good	3
Good	0
Fair	1

Compared to last year

In the previous school year (2010-2011), there were 9 students who worked in BrainWare Safari and were evaluated by their parents. As shown in Table 8, the percentage of students improving in each of the four evaluated areas, is similar across the two years.

Table8: Comparison of Students improving

Cognitive Skill Area	% 2010-2011	% 2011-2012
Memory Skills	100%	100%
Perceptual Processing Skills	89%	83%
Thinking Skills	78%	83%
Attention Skills	67%	67%

Conclusion

For the second year in a row, the BrainWare Safari implementation at COIL Charter School was successful. First, the program was implemented with the recommended time and intensity to show gains in cognitive functioning. Second, the students experienced significant improvement in their abilities in all areas assessed.