



The GAP School in Sarasota, Florida is a full-day intervention program for students ages 5 to 16, who have “fallen through the cracks” in a traditional learning environment. The school’s mission is to provide a short-term therapeutic intervention day school with long-term positive outcomes for students who need to retrain their learning abilities. The goal of the school’s single-year or multi-year programs is to enable students to return to a public, charter or private school. The GAP School offers both the advantages of outcome-based learning and the ability to provide a highly customized educational action care plan that meets the unique learning needs of each student. The program includes a Neuroscience Lab, which meets two days a week, where students work on developing their cognitive skills. The cognitive development work includes various therapies designed and guided by specialists at the facility, as well as computer-based programs.

In the fall of 2006, the staff at The GAP School decided to use BrainWare Safari with a group of their students to see if it could help some of the children who were most challenged in their cognitive abilities. Their IQ’s are in the 70 to 80 range. The staff at The Gap School expressed that students with cognitive deficits of this nature frequently experience little cognitive growth or academic achievement during a school year, and sometimes regress. The program generally expects to help them maintain their level of functioning or to increase it slightly.

The seven students who used the program ranged in age from 11.1 years to 17.7 years, with an average age of 14.0 years.¹ The students used BrainWare Safari during Neuroscience Lab (Tuesdays and Thursdays for an hour). They were pre- and post-tested with subtests of the Gibson Cognitive Battery and Detroit Tests of Learning Aptitude (DTLA). The students completed an average of 42 sessions which is within the number of sessions generally recommended for the program. In this time frame, the students completed an average of 65 levels ± 9 levels. This number of levels is somewhat lower than students have completed in previous studies.

However, it is the level of intensity and consistency of use which seem to drive cognitive growth, and these students made very high numbers of attempts, even at the lowest levels of the BrainWare Safari exercises. The very high number of attempts indicates that they were, in fact, challenged by the program and motivated to succeed despite the difficulties. The average cognitive improvement for the entire class was 9 months while chronologically they aged 8 months.

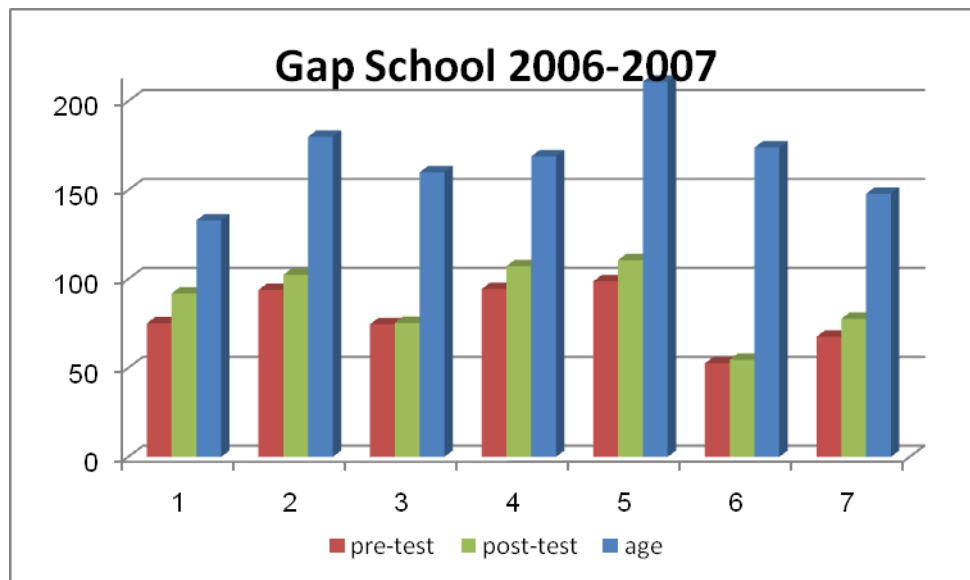


Figure 1: Individual comparison of pre-test, post-test and actual age. Ages represented in months on the vertical axis.

¹ The format of the age notations used here is Year.Month. Thus, the average age of the students is 14 years and 0 months.



Figure1 shows that each individual student showed at least one month improvement in their overall cognitive abilities. Table 1 allows a closer look at the individual growth for each area tested.

Table 1: Individual Growth for each area tested.

ID	test	Age (mo.)	Visual Dscrmntn Process (mo.)	Working Memory (mo.)	Visual-Spatial Process (mo.)	Auditory Process (mo.)	Visual Memory (mo.)	Auditory Memory (mo.)	Logic & Reason (mo.)
1	Pre	133	80	84	65	84	60	60	93
	Post	141	84	84	89	113	120	60	93
	Change	8	4	0	24	29	60	0	0
2	Pre	180	105	117	96	60	120	60	99
	Post	188	117	134	120	66	120	60	99
	Change	8	12	17	24	6	0	0	0
3	Pre	160	62	98	65	60	102	60	75
	Post	168	73	84	65	66	120	60	60
	Change	8	11	-11	0	6	18	0	-15
4	Pre	169	117	84	100	60	120	60	120
	Post	177	128	98	149	67	120	60	129
	Change	8	11	14	49	7	0	0	9
5	Pre	211	96	105	114	67	120	111	78
	Post	219	128	117	102	92	123	135	78
	Change	8	32	12	-12	25	3	24	0
6	Pre	174	60		60	68	120	60	
	Post	182	80		60	63	120	60	
	Change	8	20		0	-5	0	0	
7	Pre	148	60	92	65	64	120	72	
	Post	156	86	112	77	89	120	60	
	Change	8	26	20	12	25	0	-12	

Each of the students exhibited at least one area with significant growth. Some of the individual improvements in specific areas are dramatic. For example, Student 1 had 60 months improvement in visual memory, 24 months in visual-spatial processing and 29 months in auditory processing.

Success of the program:

The staff at The Gap School overall found using BrainWare Safari with their students a very positive experience. They were pleased with the progress made by the students individually and as a group. Compared to other cognitive skill development techniques they have tried in the past with this group of students, they felt that BrainWare was more adaptable to their classroom and showed significant positive results. BrainWare was not easy for these students. While they could understand what they needed to do, they found the exercises physically very challenging, especially those with timing and rhythm. The students were very willing to continue to work the program even though they had to log many trials to pass even the lowest levels. The level of fun increased their motivation so that their level of frustration was moderated more than what is typical with any of the paper-based products they have used.