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**BrainWare Safari  
and Students Qualifying for  
a Gifted Program  
2008-2009**



Within the last few years, the state of South Carolina changed the process for selecting students for the school districts' gifted programs. To be placed in the gifted program, students must qualify on two of three dimensions: aptitude (CogAT), achievement<sup>1</sup> (MAP) and performance (STAR). To qualify on aptitude, a student must score at the 93<sup>rd</sup> percentile or higher on at least one of the subtests of the CogAT. If a student performs at that level on the CogAT, he/she must also qualify based on his/her MAP score to be placed in the gifted program. If a student qualifies via one of those two dimensions but not both, he/she then has an opportunity to qualify based on performance, shown by further testing (STAR test). In addition, if a student's composite CogAT score is at the 96th percentile or higher, he/she automatically qualifies for the gifted program regardless of that student's MAP score.

During the 2007-2008 school year, **no** students from the second grade at an Elementary School in South Carolina qualified for the gifted program. In 2008-2009, the school district implemented BrainWare Safari with the second graders to see whether developing their underlying cognitive skills would enable them to qualify for the gifted program.

Part of this pilot involved testing the students with the CogAT twice in the year instead of the usual once a year. The group using BrainWare Safari originally comprised 76 students who were given the CogAT in the fall (first administration). Of those students, 64 were tested a second time with the CogAT and used BrainWare Safari with the desired frequency and consistency. The data presented in this report are for those 64 students.

BrainWare Safari was used over a 23-week period which included 2 weeks for winter break, 1 week for spring break and 3 weeks of MAP testing. During the break and testing weeks, the students did not use BrainWare Safari, leaving 17 weeks of actual program use. The 64 students used BrainWare Safari an average of 2 sessions a week for the 17 weeks, yielding an average of  $41 \pm 8$  sessions, and they completed an average of  $87 \pm 18.7$  levels in the program.<sup>2</sup>

**Key findings:**

- 2 of the 64 students who used BrainWare Safari met the CogAT composite test score criterion to be placed in the gifted program, scoring at the 98<sup>th</sup> and 99<sup>th</sup> percentiles respectively.<sup>3</sup>
- 5 of the 64 students who used BrainWare Safari qualified for the gifted program based on a score at the 93<sup>rd</sup> percentile in at least one CogAT subtest and their MAP testing.
- 3 of the 64 students who used BrainWare Safari scored at the 93<sup>rd</sup> percentile or higher on at least one CogAT subtest, meeting the requirement to be eligible for STAR testing which could then qualify them for the gifted program.
- 60 out of the 64 students (94%) improved their results on the CogAT test over the period during which they used BrainWare Safari.
  - 24 (38%) improved on all four CogAT subtests/scores.<sup>4</sup>
  - 26 (41%) improved on three CogAT subtests/scores.

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1. MAP (Measures of Academic Progress) is used by all but 5 districts in South Carolina as an achievement test. South Carolina State testing changed from PACT to PASS in the 2008-2009 school year. The results from that testing are not available to identify gifted students as they are not available until late fall.
  2. The recommended usage of BrainWare Safari is 30 to 60 minutes, 3 to 5 times a week for 12 weeks, resulting in 30 to 60 sessions.
  3. One of those two had previously qualified for the gifted program, based on a combination of dimensions.
  4. The CogAT subtests are verbal, quantitative and non-verbal. The composite score is a calculated score based on scores on the other tests.



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- 3 (5%) improved on two CogAT subtests/scores.
- 7 (12%) improved on one CogAT subtest/score.
- On average, the 64 students experienced substantial gains on all CogAT subtests.

BrainWare Safari usage by students qualifying as gifted:

On average, the students who used BrainWare Safari and took the CogAT at both testing sessions completed  $87 \pm 18.7$  levels in  $41 \pm 8$  sessions over 17 weeks. The number of levels completed by these students is about average for second grade students doing BrainWare in previous studies. The students who qualified as gifted or qualified for additional testing had a slightly higher but overlapping average of  $106 \pm 19.7$  levels in  $43 \pm 5$  sessions.

The six students whose performance on the CogAT qualified them for the gifted program after using BrainWare Safari completed an average of  $113 \pm 14.1$  levels and  $45 \pm 4.6$  sessions. There were four students who qualified for STAR testing after the second administration of the CogAT. One of the four was receiving special assistance and was removed from the BrainWare Pilot. The remaining three completed an average of  $96 \pm 20$  levels of BrainWare Safari over  $44 \pm 5$  sessions.

There were 17 students who completed 100 levels or more of BrainWare Safari, in an average of 46 sessions. Their qualifying outcomes were as follows:

- 2 tested gifted at the first test before using BrainWare Safari.
- 6 tested gifted at the second test following their use of BrainWare Safari.
- 2 qualified for STAR testing at the second test following their use of BrainWare Safari.

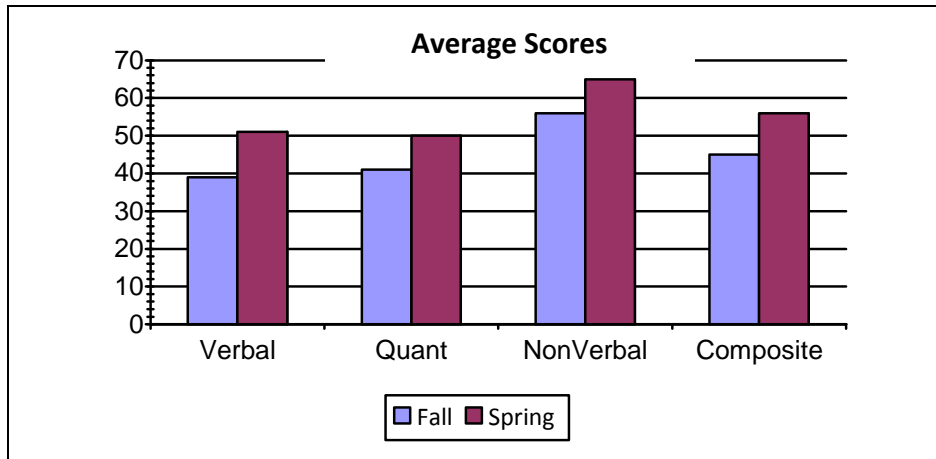
The third STAR test qualifier who used BrainWare Safari completed 73 levels in over 40 sessions.

The biggest challenge with using BrainWare Safari with the second grade students is related to dedicating the necessary computer time. The students were only able to do one session in the computer lab each week; the rest of the sessions had to be worked into the classroom rotation, using the computers in the classroom. Despite this challenge, the teachers did accomplish the goal of time on BrainWare Safari, and the students benefited as a result.

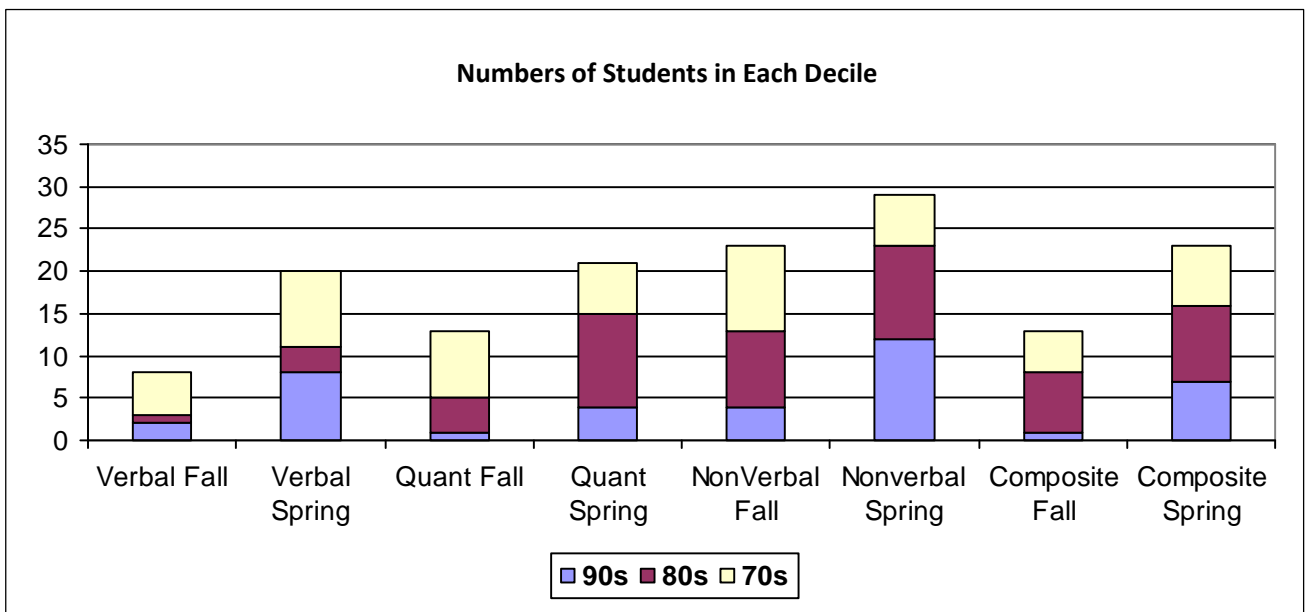
CogAT test score increases:

On average, the students who used BrainWare Safari showed an increase in each of the four scores of the COGAT test in the spring testing as compared to the fall.

<b>CogAT Sub-Test</b>	<b>Average Point Increase</b>
Verbal	12 points
Quantitative	9 points
Nonverbal	8 points
Composite	11 points



In addition to the number that qualified as gifted, many students moved closer to the qualifying range. The chart below shows dramatic differences in the numbers of students that scored in the three highest deciles: 90<sup>th</sup> percentile and above, 80<sup>th</sup> percentile and above and 70<sup>th</sup> percentile and above.





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Individual student results:

The students who qualified for the gifted program at first administration or at second administration improved their composite CogAT score by an average of 15 points following their use of BrainWare Safari, with a range of -4 (a student who had qualified for the gifted program in the fall) to an increase of 35 points.

Of the 13 second-grade students who qualified for the gifted program and used BrainWare Safari:

- 9 (69%) improved on all four CogAT subtests/scores.
- 3 (23%) improved on three CogAT subtests/scores.
- 1 (8%) improved on two CogAT subtests/scores.

ID	BWS Levels	BWS Sessions	Weeks	Individual Student Results Ses/wk	CogAT (Spring/Fall)				Qualified
					Verbal	Quant	NonV	Comp	
					SC107	109	45	15	
SC110	73	40	15	3	55/91	71/77	88/99	75/95	Star Spring
SC111	103	49	19	3	16/35	38/60	73/94	40/69	Star Spring
SC121	78	42	16	3	17/71	27/57	96/93	52/77	Previously
SC151	111	48	20	2	91/93	79/86	84/95	88/94	Gifted Spring
SC153	81	40	21	2	79/97	97/83	79/95	91/95	Gifted Fall
SC154	111	43	18	2	50/40	77/84	92/96	79/81	Star Spring
SC156	133	38	17	2	67/69	81/87	97/86	88/84	Gifted Fall
SC157	120	41	17	2	71/91	84/95	86/99	83/98	Gifted Fall
SC161	100	44	17	3	62/89	84/91	89/97	83/95	Gifted Spring
SC165	139	55	17	3	27/71	43/69	73/93	48/83	Gifted Spring
SC173	102	43	17	2	91/98	77/95	73/98	84/99	Gifted Spring
SC176	116	37	21	2	65/71	86/95	84/98	81/95	Gifted Spring

Conclusions:

Across the district on the CogAT fall test, 144 of the 3,020 second grade students scored well enough to meet the gifted qualifying level, or 4.7% of the second graders in the district. At the elementary school where the second graders used BrainWare Safari, 6 of 64 students qualified for the gifted program following their use of BrainWare Safari, or 9.4%.

The number of students qualifying for the gifted program increased dramatically after using BrainWare Safari. Moreover, most students who used the program improved their aptitude scores on the CogAT, showing the broad-based benefits of developing students' cognitive ability with BrainWare Safari.