



**Hillsborough County**  
**PUBLIC SCHOOLS**  
*Excellence in Education*

## Report of *iStation* 2009 Second Grade- 2010 Third Grade Users

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## Executive Summary

*iStation*, formerly known as Imagination Station, is used now in district elementary schools as a remedial reading program for students who struggle with reading when provided Tier 1 general reading instruction. The Supervisor of Elementary Reading and Language Arts requested information about how *iStation* results correlated with Stanford-10 reading in second grade and FCAT reading in third grade. To answer her question, data were provided by *iStation* for the population of third graders in 2010-11 who used the system both as 2009-10 second graders and 2010-11 third graders. Their results were viewed in light of these students' second grade Stanford Achievement Test-10 results and their third grade Florida Comprehensive Assessment Test (FCAT 2.0) results.

Findings include the number of students who used the system each month as well as their monthly *iStation* Indicators of Progress (ISIP) total reading results in grades 2 and 3 and their results with Stanford-10 in grade 2 and FCAT 2.0 in grade 3. Overall, *iStation* use grew from 15 students in August at the very beginning of the school year in 2009 to 5580 students in March 2010 (grade 2 only) and 5431 in October 2010 (third grade only). The number of students is included in Table 1 for each month along with mean ISIP scores.

Results showed a strong correlation between the Total Reading ISIP measure and second grade Stanford-10 (correlation coefficient= 0.753 for the 5097 students who took both measures). This result was statistically significant at the 0.01 level. Similarly, the Total Reading ISIP score and the FCAT 2.0 third grade score correlated significantly at the 0.01 level of significance (correlation coefficient=0.72 for the 2965 students who took both measures). See Figures 1 and 2 in the report for the scatter plots.

In conclusion, the answer to the supervisor's question is yes, the results of the *iStation* ISIP Total Reading strongly correlate to outcome measures used in the district. *iStation* can be used with a strong degree of assurance that success on one measure is mirrored in the outcome measures.

In addition, months with peak usage in 2009-10 (for grade 2 students) were January to May (over 5,000 students tested each month). In 2010-11, peak usage for grade 3 was noted to be October (N=5,431) to March (with over 4,000 students using the system each month). See Figure 3 in the report for additional details.

The mean overall ISIP scores in grades two and three increased regularly with additional months of usage and instruction as one would expect (from an average score of 217 in September 2009, grade 2, to 232 in May, 2009 and from 235 in September, 2010, grade 3, to 241 in May, 2011). See Figure 4 in the report for the month by month mean ISIP Total Reading scores.

Recommendations include identifying early those students who would most benefit from using *iStation*. Ensure that they use the system regularly and for sufficient time to continue to progress without missing their regularly scheduled reading time with the large group. There was a tendency to see lower numbers of second and third grade users early in the school year (August to November). Those identified as struggling readers who would benefit from the system should begin use no later than early October.

An additional recommendation is to attend, in a timely manner, to academic alerts generated by the system while simultaneously attending to other beginning-of-the-year screenings and assessments. The

current department directive has been to have teachers review iStation reports weekly (no less than once every two weeks) and to “satisfy” the alerts in the iStation system only when iStation lessons were delivered to address the noted concern in order to maintain strict fidelity to the iStation system. This practice underestimates the number of students whose reading skill needs have been addressed, however. It is recommended that the department consider having teachers note in iStation when a specific lesson was delivered, even if of the teacher’s design or if from another program used in the district, if the intervention lesson is specific to the child’s noted area of need. This should enable the students’ needs to be attended to more freely as well as to capture information about when the specific lessons are delivered. This is being discussed in the department.

### Background

District personnel asked specifically if the scores seen in *iStation* users in grades 2 and 3 correlated to other measures, including Stanford 10 in grade 2 and FCAT in grade 3. This focused study was intended to determine the correlations between the *iStation* Indicators of Student Progress (ISIP) total reading score and the grade 2 Stanford-10 Total reading in April 2010 as well as the ISIP total reading and the same third grade users' FCAT 2.0 reading scores in April 2011.

Table 1: Numbers of Students Participating and Mean *iStation* Total Reading Scores

	N	ISIP Mean Score	Grade	Grade 2 Stanford 2010 Total Reading NCE	Grade 3 FCAT 2.0 Reading 2011
August 2009	15	221.29	2	48.6, N=6578 Correlation Coefficient=.753*	
September 2009	222	217.48	2		
October 2009	1430	221.54	2		
November 2009	3498	223.67	2		
December 2009	4038	224.72	2		
January 2010	5185	226.64	2		
February 2010	5574	228.26	2		
March 2010	5580	229.93	2		
April 2010	5180	231.03	2		
May 2010	5238	231.73	2		
June 2010	4027	231.40	2		
July 2010	603	223.84	3		
August 2010	360	241.17	3		
September 2010	3240	235.42	3		
October 2010	5431	236.15	3		
November 2010	5427	237.09	3		
December 2010	4582	237.31	3		
January 2011	4834	239.05	3		
February 2011	4400	239.14	3		
March 2011	4013	239.67	3		
April 2011	2985	239.31	3	N=2965, Mean DSS=1733.7, Mean SS=310.7, Mean AL=2.72 Correlation Coefficient=.72*	
May 2011	3338	240.83	3		
June 2011	2206	238.43	3		

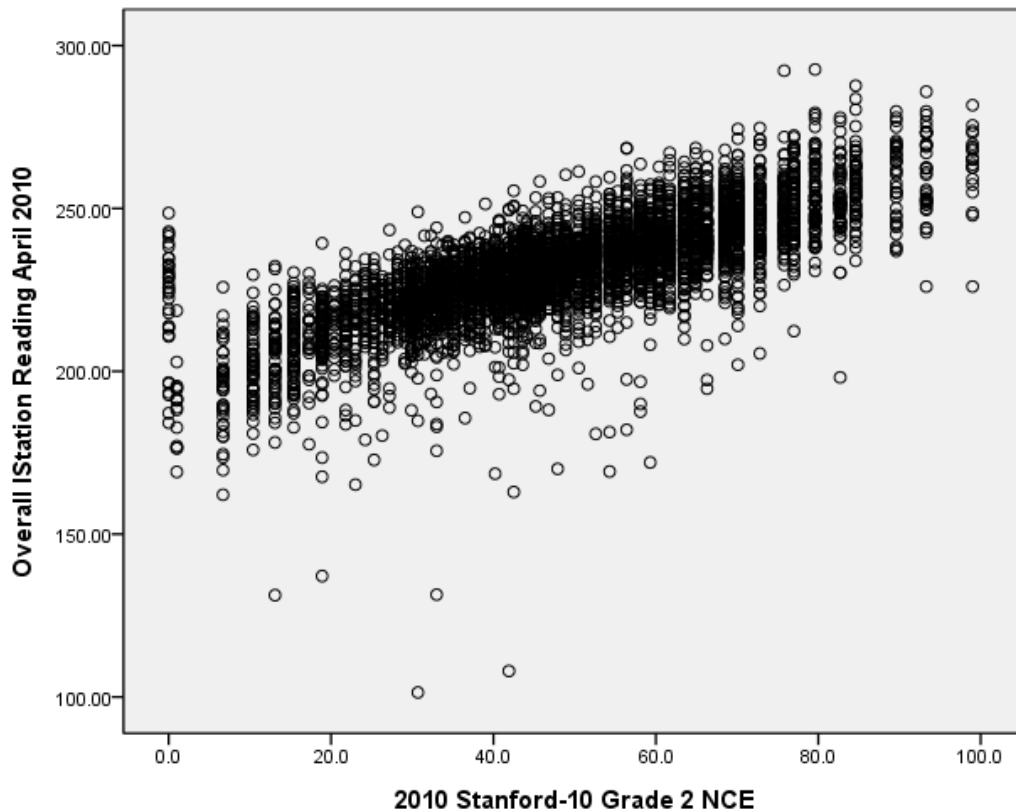
\*Significant at 0.01 level of significance

This analysis consisted of examining the ISIP scores and Stanford scores in April 2010. As can be seen in Table 1, the correlation of 0.753 was statistically significant at the 0.01 level, corroborating the notion that ISIP total reading and Stanford Total Reading scores are highly correlated. Similarly, as can also be seen in Table 1, ISIP total Reading scores were statistically significantly related at the 0.01 level of significance to FCAT 2.0 reading scores in grade 3 with a correlation of 0.72. Results are consistent with the vendor's document called the *Correlation of ISIP Overall Ability Scores with Instructional Reading Levels* (See Appendix A), in which the *iStation* Overall Reading test is reported to correlate most highly to the Stanford overall reading and the FCAT reading strategies according to *iStation* personnel.

To view graphically the correlation between ISIP scores and the Stanford-10 second grade Normal Curve Equivalents (NCEs) graphically, a scatter plot was created. Please see Figure 1 below.

Figure 1

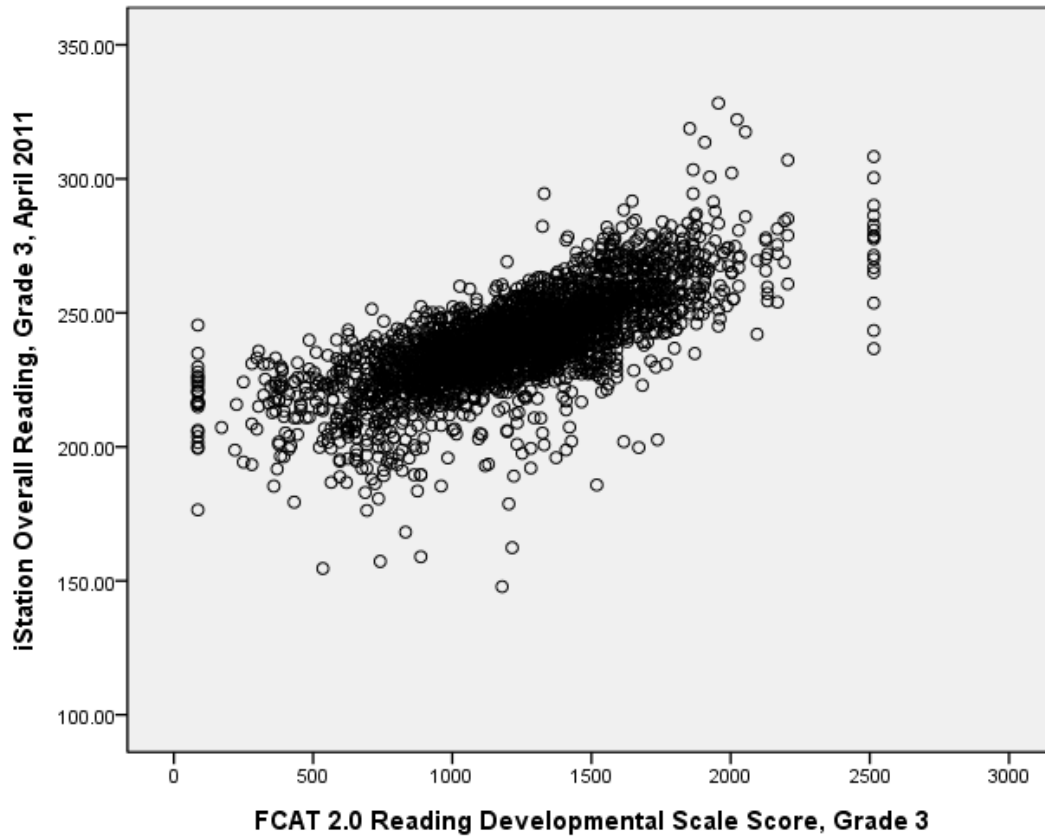
Scatter Plot of April 2010 *iStation* Overall Reading and 2010 Grade 2 Stanford Reading Normal Curve Equivalents (NCEs) 2010



Similarly, to see the graphical representation of scores in April 2011 between ISIP and FCAT 2.0 Developmental Scale Score (DSS) points for third grade students, please refer to Figure 2 below.

Figure 2

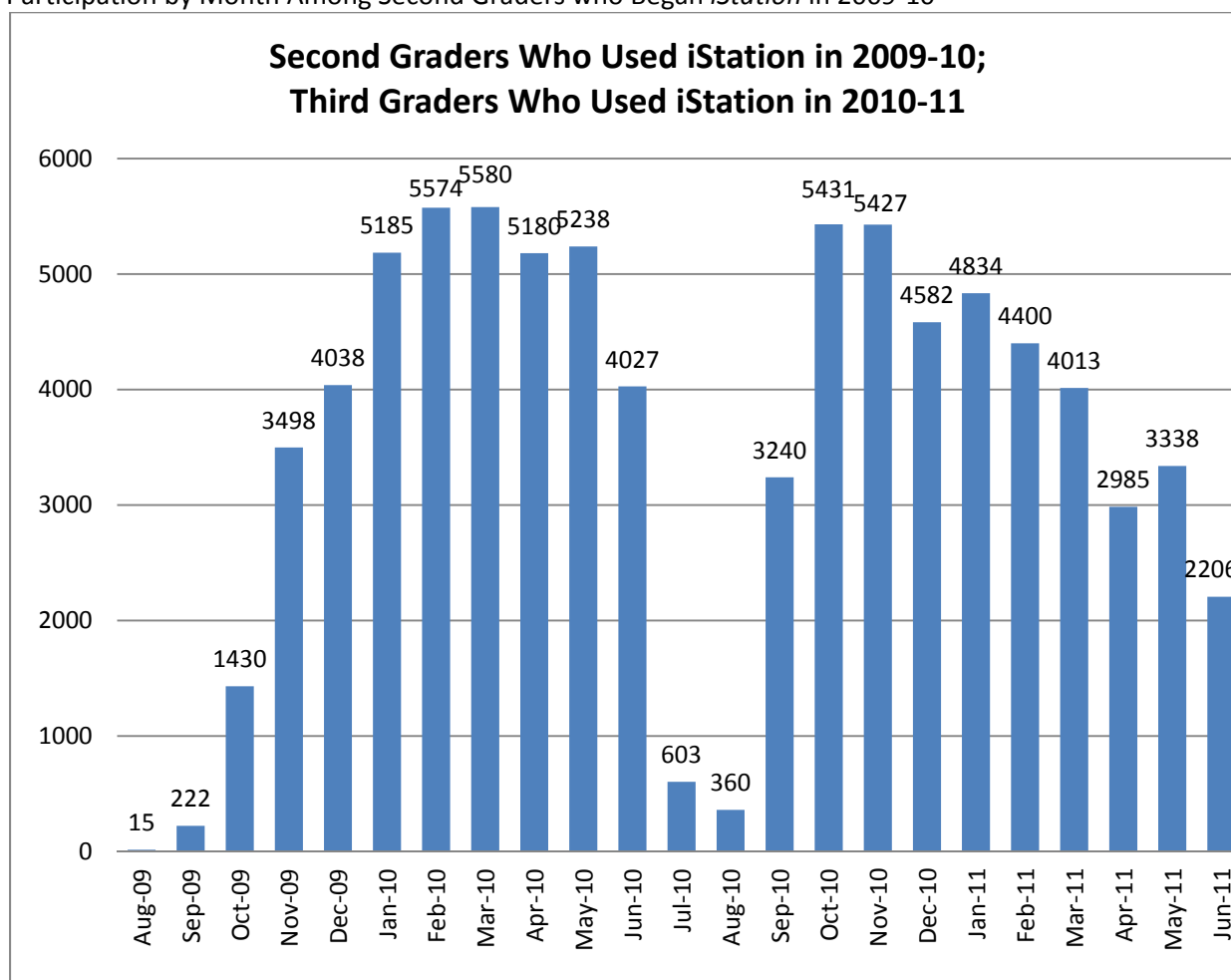
Scatter Plot of April 2011 *iStation* Overall Reading and 2011 Grade 3 FCAT 2.0 Developmental Scale Score points (DSS) 2011



*iStation* personnel determined the population by first identifying the third grade students who used *iStation* in 2010-11 and then pulling scores for the matched students who used *iStation* in 2009-10 as second graders. Thus results represent the same group of students. In Figure 3, overall district participation in grades 2 and 3 from 2009-10 to 2010-11 can be seen.

Note that peak district participation ranged from January to May 2010 and October 2010 to March 2011. It is good to see usage/intervention occurring earlier in the year for the third grade year.

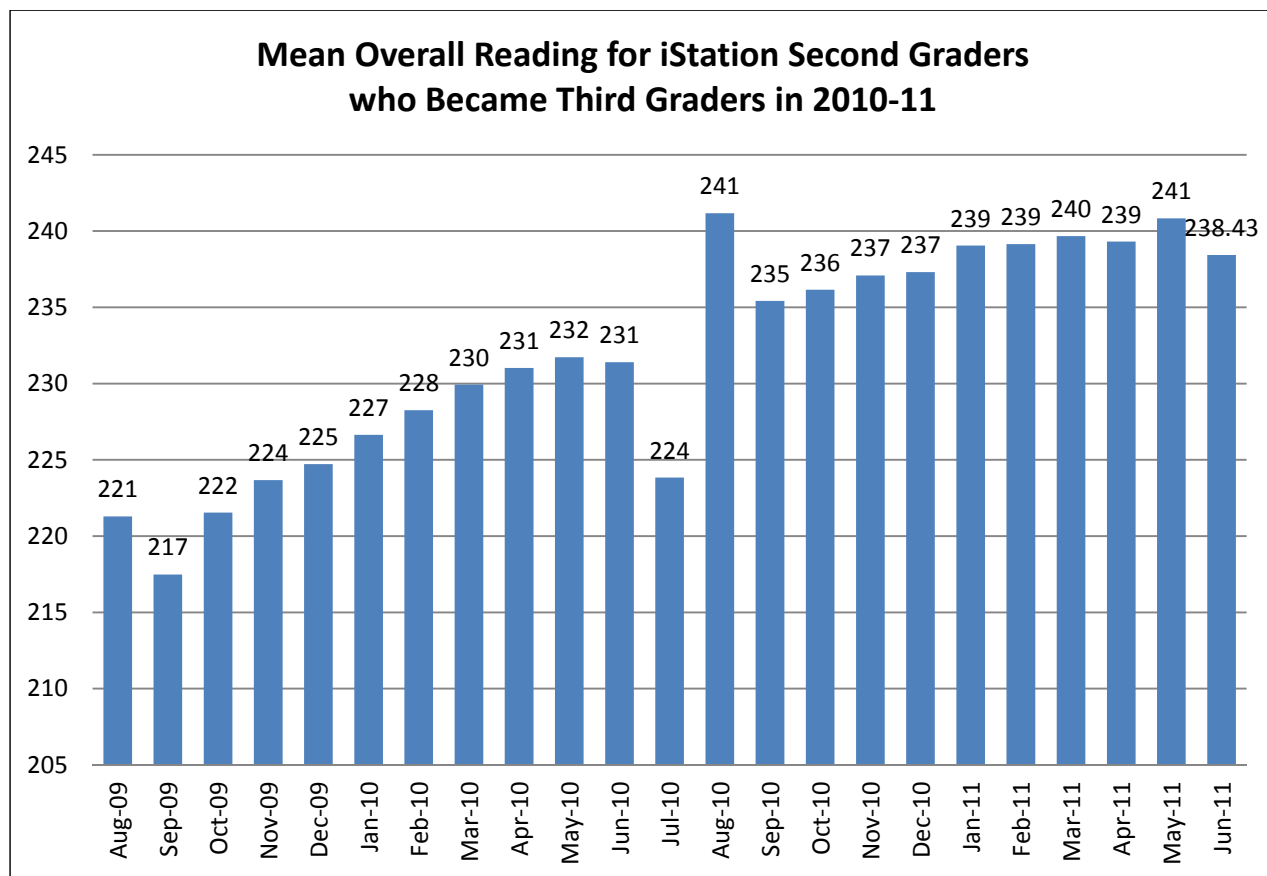
Figure 3  
Participation by Month Among Second Graders who Began *iStation* in 2009-10



In Figure 4, one can see the progression from grade two mean ISIP scores of a low of 217 early in the year to a high of 232 late in the year for the second graders. This aligns from beginning to ending second grade levels, DRA levels of 16 to 30, and Lexile levels from 300 to 500 (See Appendix A for descriptions of how different tests are believed to correspond).

Grade three students' ISIP mean scores ranged from a low of 235 early in the year to a high of 241 late in the year. There appeared to be less participation as well as less score growth in grade 3 compared to grade 2. The district typically has had more of the younger students participate with this program. Grade 3 ISIP scores are expected to be between 229 and 239, which also represents a narrow score range. Corresponding DRA2 levels ranged in grade 3 from 30 to 38 with Lexiles expected for the grade to range from 500 to 749. See Appendix A.

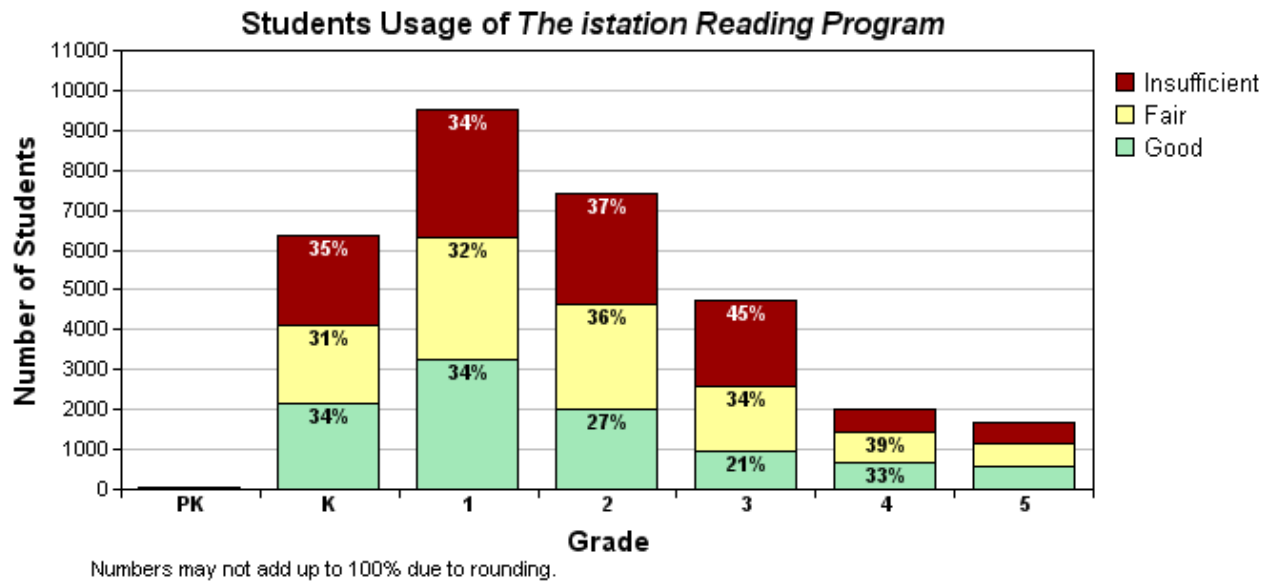
Figure 4  
Mean Overall Reading *iStation* Scores, August 2009-June 2011



To supplement the information gained from 2009-10 and 2010-11 outcomes, a brief snap shot of current 2011-12 usage was examined. Two elements were viewed: student usage of the program by grade level (see Figure 5) and academic alerts generated by the program (see Table 2).

As expected, the program is heavily used in kindergarten to grade 2. In these grade levels 63 to 66% of the students using *iStation* had fair to good usage (sufficient time and frequency on the system to benefit the student). The remaining third had insufficient use according to system guidelines (see Figure 5).

Figure 5  
October 2011 Student Usage of the *iStation Reading Program*



In Table 2, the numbers of academic alerts generated and responded to are noted by area and by focus schools (Tier 2 and 3). Of concern is the fact that many academic alerts are generated for students using the program, but under current guidelines, only 1 to 5 percent of these are acknowledged to date. Those that are acknowledged are acknowledged quickly (on average in less than one day). However, the vast majority, 98%, have not been acknowledged.

Various interpretations of these data are possible. It could be that 98% of our teachers are comfortable planning and delivering lessons for their children identified with specific reading needs. Alternately, teachers have not reviewed the alerts, generated *iStation* lessons, acknowledged the lesson delivery in the *iStation* system, or some combination of these possibilities. Ultimately, the students with identified needs must have the appropriate intervention. Consistent use of this system would provide a valuable tracking system for lesson delivery. It must be remembered that delivery of a lesson, though, may or may not mean the student has mastered the needed material.

According to the District Resource Teacher who works with *iStation*, teachers have been asked to look at the *iStation* reports weekly or at least once every two weeks. Teachers, in the past, have noted in the system "Intervention lesson delivered" only if they delivered the corresponding *iStation* lesson. It is recommended that the department consider having teachers note "Intervention lesson delivered" if they have generated and delivered a focused lesson to the student in question whether or not it was a lesson officially generated by *iStation*. This is being discussed now in the department.

Table 2  
Academic Alerts Generated by the *iStation Reading Program*, October 2011

Class or Campus*	Number of Alerts	Percentage of Alerts Acknowledged	Average Days taken to Acknowledge
<a href="#">Area I</a>	9913	2%	0.6
<a href="#">Area II</a>	11376	5%	0.6
<a href="#">Area III</a>	9842	1%	0.1
<a href="#">Area IV</a>	12888	2%	0.2
<a href="#">Area V</a>	16882	4%	0.4
<a href="#">Area VI</a>	13408	3%	0.7
<a href="#">Area VII</a>	9680	1%	0
<a href="#">Focus Schools - Tier 2</a>	8505	1%	0.2
<a href="#">Focus Schools - Tier 3</a>	6560	2%	0.1
<a href="#">Manager Groupings</a>	50446	2%	0.2
<a href="#">Subscription Elementary</a>	<b>82131</b>	<b>2%</b>	<b>0.3</b>

\*Click on the link to see each area detail. Login information is required to view detail reports.

### Recommendations

1. District personnel can be comfortable with the fact that *iStation* ISIP test results correlate strongly with district outcome measures. In both the case of Stanford-10 and FCAT 2.0 in grades 2 and 3, respectively, ISIP test results are statistically significantly correlated at the 0.01 level. Correlation coefficients were 0.753 and 0.72, respectively, between ISIP and Stanford-10 and FCAT 2.0.
2. Monitor district participation in each grade level. At the beginning of the 2011-12 school year, usage is strong in K-2 with the highest numbers of students using in grade 1, although approximately one-third have used infrequently or for insufficient amounts of time.
3. Continue to monitor interventions delivered to students at risk for reading difficulty. As of October 3, 2011, over 82,000 *iStation* alerts had been noted in the district for students who need additional reading support, yet only 2% had been acknowledged in the system. That is not to say the student needs may not have been acknowledged elsewhere, however, for this portion of the system to be used effectively, data must be attended to within the system.
4. Continue to assist schools to manage the many systems with which they monitor reading and plan intervention (ECHOS, FAIR, *iStation* among others) since so many require initial baseline measures. For example, in kindergarten, screenings are expected for vision, hearing, speech/language, and academic skills with ECHOS, FAIR, and KRT. Even though the three latter assessments are coordinated to avoid duplication, there is much to do at the beginning of the year.
5. Identify early those students who would most benefit from using *iStation*. Teachers must manage their time using the program and ensure that they use the system regularly and with fidelity (in terms of length of time on task and frequency of use) in order to continue to progress academically without missing their regularly scheduled reading time with the large group.

Appendix A  
Reading Level Correlation as per *iStation*

Correlation of ISIP Overall Ability Scores with Instructional Reading Levels					
Grade Level	ISIP Ability Scores	DRA2 Developmental Reading Assessment	Lexile Levels	Guided Reading Fountas & Pinnell Levels	Basal Reading Levels
Kinder	184-190	A-1	< 200	A	Readiness
	190-197	2		B	
	197-204	3-4		C	Pre-Primer
First Grade	204-216	6	200-299	D	
		8		E	
		10		F	Primer
	216-221	12		G	
		14		H	1st Grade
		16		I	
Second Grade	221-230	18	300-399	J	2nd Grade
	230-235	20		K	
	235-240	24	400-499	L	
	240-246	28		500-599	
30		N	3rd Grade		
Third Grade	246-251+	34		600-699	O
		38			P
	Fourth Grade	1787-1816	40	700-749	Q
1816-1853		R			
1853-1891		S			
Fifth Grade	1891-1912	50	750-849	T	5th Grade
	1912-1969			N/A	
Sixth Grade	1969-2022	N/A	900-949		W-X
	2022-2050			N/A	
Seventh Grade	2050-2075+	N/A	1000-1100		Y-Z
Eighth Grade					

**Disclaimer:** This table does not reflect an empirical study of alignment among the leveling systems. Each publisher uses its own technical definitions of grade level and implements its own criteria about the level of comprehension needed to demonstrate grade level performance. Educators should not interpret or treat this table as definitive and should take individual differences into account when selecting text and planning instruction.