

EduSmart Science Preliminary Report

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Executive Summary

This preliminary report presents the findings from the evaluation of the schools using EduSmart Science program from January 2008 to May 2009. The report was based on student achievement, teacher satisfaction, and teacher and principal testimonials. As of January 2008 to May 2009, 74 Texas schools purchased EduSmart Science. Schools had the software from less than a month to 15 months.

Campus Level TAKS

The campus level Science TAKS results were used to measure student achievement. Of the 28 schools submitting data, 27 maintained or increased their percentage gains for students passing the Science TAKS. In addition, 24 of the 28 schools maintained or increased their percentage gains of students scoring commended on the Science TAKS.

Teacher Survey Responses

An EduSmart survey measured teacher satisfaction. Of the 11 teachers that responded to the EduSmart Survey, 100% of the teachers agreed or somewhat agreed that EduSmart as a learning resource;

- Was easy to use
- Was fun to use
- Was enjoyed by students
- Produced improved student engagement
- Was well aligned to TEKS

Additionally, teachers highly rated the overall usefulness of EduSmart (4.63 on a 5 point scale) and 80% of the teachers thought that EduSmart fit well with their teaching strategies.

Teachers liked several aspects of the EduSmart program. They enjoyed the formatting and found it easy to follow. They also felt the presentation kept their students engaged in the lessons.

Teachers reported using two teaching strategies with EduSmart; Use of End of Lesson Quizzes and Re-teaching. Teachers used the quizzes to check for comprehension of the content and to re-teach or reinforce objectives. They also described high Student Engagement and Higher Scores as evidence of the impact of EduSmart.

Testimonials

The Teacher and Principal Testimonials support the findings of the Teacher Survey. Teachers reported seeing Higher Scores in percent passing and commended. They also described the Varied Utility of the EduSmart program among their schools such as for re-teaching, in a “center”, for tutorials and test review. Principals reported higher test scores as a result of EduSmart.

Overall, the campus level data, teacher survey, and teacher and principal testimonials present positive perspectives of the EduSmart program.

Introduction

The Edumatics Corporation contracted with Harris County Department of Education to summarize preliminary data they had collected on student achievement, teacher satisfaction, and teacher and principal testimonials for campuses that had purchased EduSmart Science from January 2008 to May 2009. This EduSmart Science Preliminary report consists of three sections including Schools with EduSmart, Campus Level TAKS, Teacher and Principal Responses, and Highlights/Recommendations. EduSmart and the Texas Education Agency Website provided data for the evaluation.

Schools with Edusmart

The following table displays the schools that have purchased and/or piloted Edusmart over a 15-month period (between 1/2008 and 5/2009) and the number of months schools had the software prior to the administration of the Science TAKS test.

Table 1: Schools Purchasing EduSmart

Schools	Months with EduSmart before 08/09 TAKS	Schools	Months with EduSmart before 08/09 TAKS
Fort Bend ISD		Midland ISD	
E.A Jones	1	Long	6
Meadows	3	Jones	6
Goose Creek ISD		Milam	6
Carver	3	Burnet	5
San Jacinto	3	Aldine ISD	
Alamo	3	Eckert Intermediate	4
Pumfrey	3	Hill Intermediate	0
Crockett	3	Houston Academy	4
Houston ISD		Marcella Intermediate	4
Alcott	3	Parker Intermediate	5
Almeda	5	Reed Academy	4
Bastian	1	Stehlik Intermediate	4
Bell	1	Wilson Intermediate	4
Braeburn	0	Alief ISD	
Brookline	1	Budewig Intermediate	1
Codwell	10	Klantzman Intermediate	1
Cornelius	10	Mata Intermediate	1
Elrod	1	Miller Intermediate	1
Emerson	1	Owens Intermediate	1
Frost	1	Youngblood Intermediate	1
Golfcrest	5	Lufkin ISD	
Grimes	1	Dunbar Primary	0
Grissom	5	Mission ISD	
Hobby	5	Alton	0
Caldwell	5	Bryan	0
Gross	1	Cantu	0

Seguin	3	Castro	0
Smith	0	Cavazos	0
Kashmere Gardens	5	Escobar/Rios	0
Mading Elementary	0	Leal	0
Mitchell	3	Marcell	0
Montgomery	1	Midkiff	0
Park Place	10	Mims	0
Parker	0	O'Grady	0
Red	0	Pearson	0
Rhoads	4	Salinas	0
Tijerina	1	Waitz	0
Travis	0	Pasadena ISD	
Wainwright	7	Schneider Middle	0
West University	4		
Windsor Village	4		
Klein ISD			
Mittelstadt	15		

A total of 74 Texas schools have purchased EduSmart Science since January 2008. Schools had the software from less than a month to 15 months (mean of two months with Klein ISD, Mittelstadt removed) prior to administration of the 08/09 Science TAKS test.

Campus Level TAKS

TAKS data for 07-08 and 08-09 was submitted on 28 of the schools that had purchased EduSmart. Percentage gains from the first to the second year of data for the Science TAKS test were calculated for the percentage of students passing TAKS and percentage of students scoring commended. The following table displays the Schools that have 08-09 TAKS scores available (grouped by school district), the number of months with EduSmart before TAKS and the percentage gains for students that passed the Science TAKS and students that scored commended.

Table 2: Percentage Gains Science TAKS

Schools By School District	Acct. rating	N tested	Months w/ EduSmart before 08-09 TAKS	Passed	Commended
Fort Bend ISD					
Jones			1	30.90%	-40.00%
Meadows			3	11.40%	13.70%
Goose Creek ISD					
Carver			3	30.80%	52.90%
San Jacinto			3	13.20%	-40.50%
Pumfrey			3	9.00%	-15.80%
Alamo			3	3.50%	28.60%
Crockett			3	1.20%	39.40%
Houston ISD					
Kashmere Gardens			5	83%	600.00%

Rhoads	4	55.20%	700.00%
Golfcrest	5	29.70%	140.00%
Almeda	5	27.60%	19.20%
Tijerina	1	21.70%	86.70%
Hobby	5	19.40%	104.30%
Alcott	3	18.10%	82.10%
Wainwright	7	14.30%	-5.60%
Brookline	1	11.90%	47.10%
Mitchell	3	10.30%	117.40%
Caldwell	5	6.30%	158.80%
Seguin	3	4.20%	18.20%
Grissom	5	1.20%	70.00%
Travis	0	1.10%	17.30%
West University	4	1.00%	9.10%
Bell	1	0.00%	19.00%
Codwell	10	0.00%	100.00%
Cornelius	10	0.00%	6.40%
Park Place	10	0.00%	6.30%
Windsor Village	4	-6.10%	19.40%
Klein ISD			
Mittelstadt	15	11.40%	33.30%

The mean number of months these 28 schools had EduSmart was 4.46. Mittelstadt Elementary accessed EduSmart the longest with 15 months while Travis Elementary had the least amount of time implementing EduSmart (less than a month).

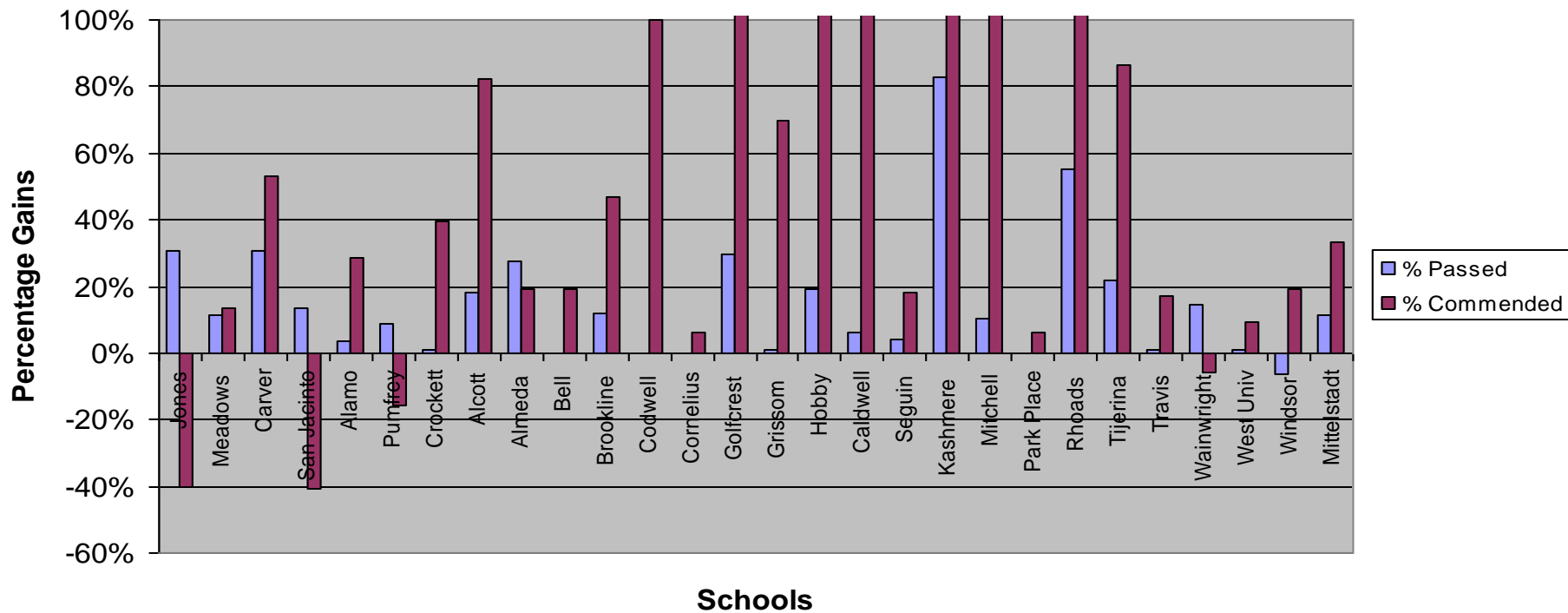
Percentage Passed

Of the 28 schools, 27 maintained or increased their percentage gains for students passing the Science TAKS. Kashmere Gardens Elementary represented the greatest gain with an 83% increase followed by Jones Elementary (30.9%) and Carver Elementary (30.80%). Windsor Village Elementary revealed a 6.10% decline in percentage passing.

Percentage Commended

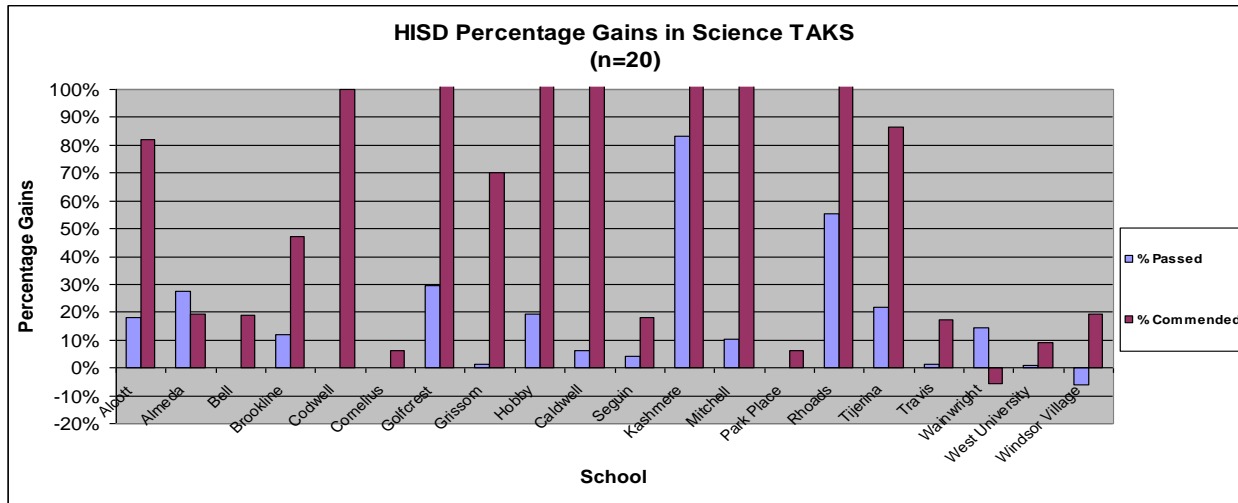
Twenty-four (24) of the 28 schools maintained or increased the percentage of students scoring commended on the Science TAKS test. Rhoads Elementary showed the greatest percentage of commended students with an increase of 700% followed by Kashmere Gardens Elementary at 600%. Carver Elementary represented the greatest decline in percentage of commended at 40.50%. The graph below shows overall percentage passed and commended for the Science TAKS.

Overall Percentage Gains for Science TAKS (n=28)



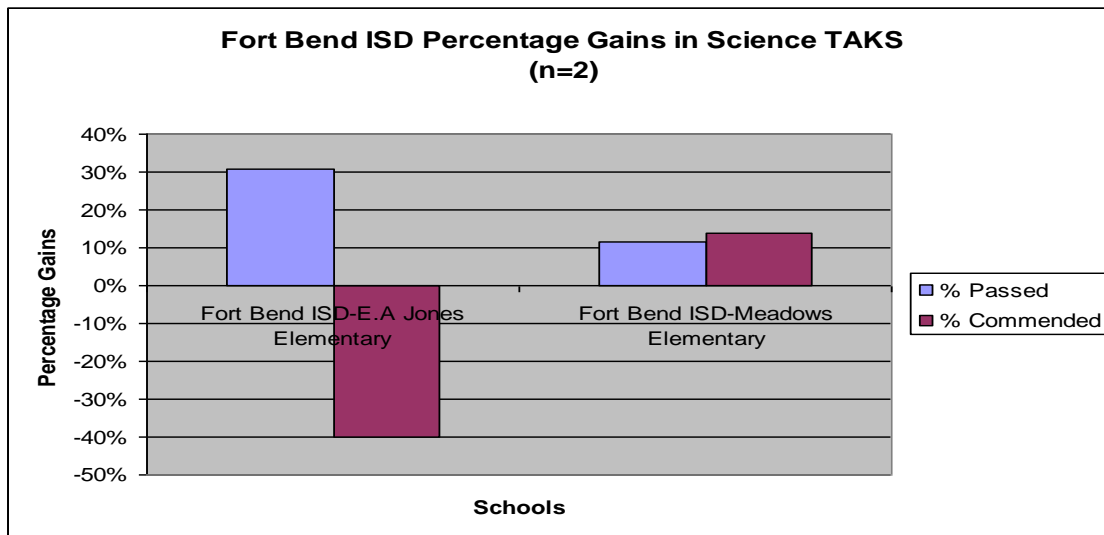
Houston ISD (HISD)

Data showed that 95% (19) of the submitted HISD schools showed a percentage gain for students passing the Science TAKS and scoring commended. Kashmere Gardens Elementary represented the greatest gain with 83% students passing. Rhoads Elementary displayed the greatest percentage for students scoring commended at 700%. The graph below shows percentage gains for HISD.



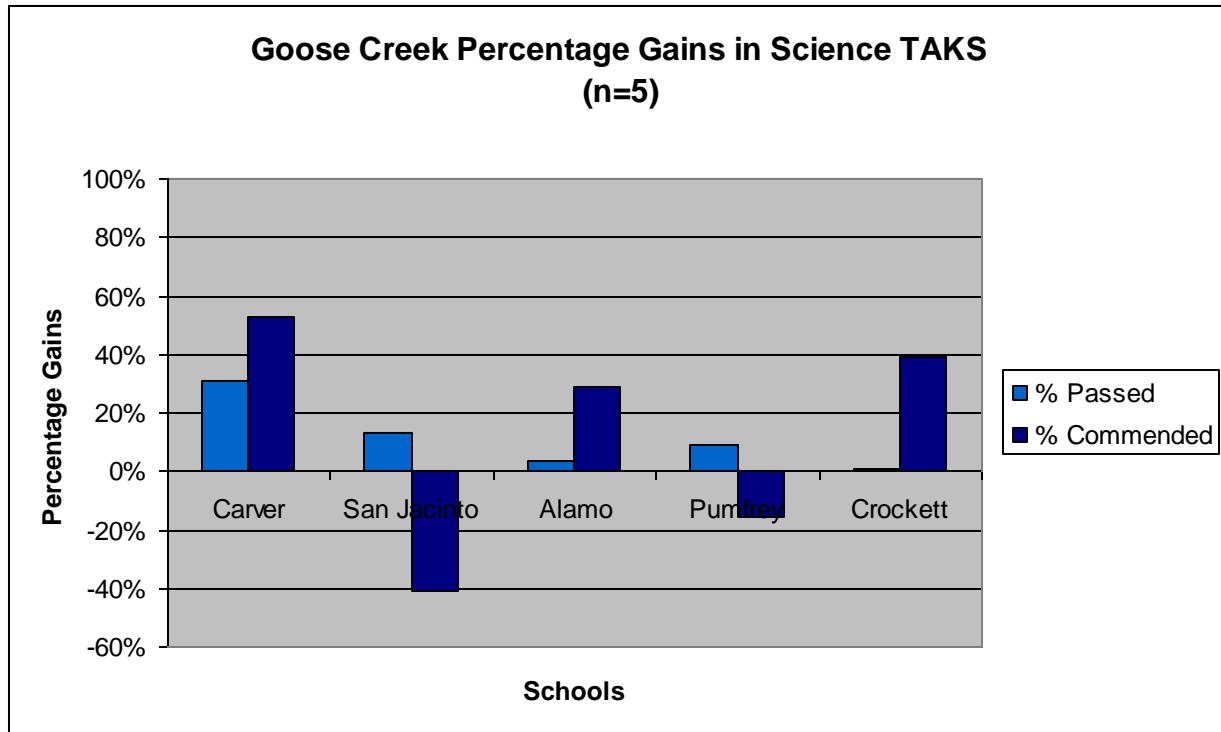
Fort Bend ISD

TAKS data submitted for Jones Elementary and Meadows Elementary showed varied results. Jones Elementary showed the greatest percentage for students passing at 30.8%. On the other hand, Jones Elementary experienced a 40% decline for students scoring commended, compared to the previous year while Meadows Elementary reported a 13.7% percentage gain for students scoring commended.



Goose Creek Independent School District

All 5 schools for the Goose Creek ISD reported percentage gains in students passing the Science TAKS. Carver Elementary had the greatest percentage gain at 30.8%. Results for students scoring commended reveal 3 of the five schools showing percentage gains. Carver Elementary also displayed the greatest percentage gain for commended students at 52.9%.



Teacher Survey Responses

Eleven teachers responded to the EduSmart survey. Of these, 45.5% (5) indicated that this was their first digital resource they have used to teach science while, 54.5% (6) revealed that they have used other digital resources to teach science. Some of the digital resources previously used included:

- Sunburst
- COW
- Smart Boards
- Interactive websites

The teachers reported using EduSmart with different frequencies with 8 using EduSmart *Every other class*, 2 using the program *Every class*, and 1 using the program *Occasionally*.

Teachers provided several examples for their Likes and Dislikes about EduSmart. Teacher responses were grouped into themes. Teacher Likes about EduSmart included Program Format/Presentation, User Friendly, and Student Engagement. Teachers reported that Edusmart is clear and well organized. Additionally, the application is easy to understand for students and results in greater student engagement in the science lessons.

Teachers reported Dislikes for the Missing TEKS and Lack of Information. For example, they stated that EduSmart was not covering or including all TEKS. Additionally, they suggested that EduSmart needs more questions and content.

The table below lists examples of the Likes and Dislikes reported about the EduSmart program.

Teacher Likes/Dislikes of EduSmart
Likes
<p><u>Program Format/Presentation:</u> <i>I LOVE the program! I love how it is organized, and I love how it is so user friendly. The lessons are clear and concise - the children easily understand the concepts and obviously benefit from the lessons. I also find the quizzes and the vocabulary very.</i></p> <p><i>Format and organization relevant to what is being taught.</i></p> <p><i>Click-n-tick, graphics, connections</i></p> <p><u>User Friendly:</u> <i>It is very user friendly. I like the fact that it has the TEKS listed.</i></p> <p><i>It is very easy to understand. The content is child-friendly.</i></p> <p><i>It is kid-friendly, high interest, entertaining without pandering to the students', challenging and addresses exactly what they need for their grade level's science.</i></p> <p><u>Student Engagement:</u> <i>I liked the way the information was presented. The students were engaged the entire time.</i></p> <p><i>I liked that it gave everyday uses for science. Our children were engaged and were asking questions that were so much greater than those when using the textbook.</i></p> <p><i>...I like that it has numerous interactivities also that allow the students to "be involved"</i></p>
Dislikes
<p><u>Missing TEKS:</u> <i>I would like all the objectives we are required to cover to be available on EduSmart.</i></p> <p><i>I needed TEKS that were not there.</i></p> <p><i>Objective 12 is not included.</i></p> <p><i>It does not cover all the TEKS. My suggestion would be to get all the TEKS at all grade levels added.</i></p> <p><u>Lack of Information:</u> <i>More interactive questions on the quizzes - maybe incorporate some higher level questions for students to write about...</i></p> <p><i>Needs more content and information on all the objectives</i></p>

Teachers also rated various statements on EduSmart as a Learning Resource. They agreed or somewhat agreed 100% of the time for all items.

Table 3: EduSmart as Learning Resource

Items	N	Percentage Agree/Somewhat Agree
It is easy to use.	11	100%
It is fun to use.	11	100%
My students enjoyed using this resource.	11	100%
It produced improved student engagement	11	100%
It is well aligned to TEKS.	11	100%

When determining *how EduSmart fits with their current teaching strategies*, 80% (8) of the teachers thought that EduSmart fit well with their teaching strategies while 20% (2) thought it fit but they had to make a few accommodations.

For the question, *Please share any effective strategies you have employed with EduSmart that would benefit other teachers*, teachers identified two strategies, End of Lesson Quizzes and Re-teaching. They used the End of Lesson Quizzes to evaluate student comprehension of the science content and as a Re-teaching tool to review objectives, reinforce concepts, and address student weaknesses. The teaching strategies are provided below.

Teaching Strategies Used with EduSmart

End of Lesson Quizzes: *We used the questions at the end as a quiz, and then went back through the content to check for understanding.*

Our students took the end of lesson quizzes in there journals, were their notes were. Then we replayed and the watched it the second time with a focus of answering the questions given.

Take advantage of the multiple choice questions at the end of each segment.

Re-teaching Strategies: *I use it every day in after-school tutorials to re-teach and reinforce what we are doing, plus to reinforce past TEKS so that they will be ready for testing.*

EduSMART allows you to easily go back over specific objectives where needed...

In the lab each students is given opportunity to focus on their weak areas.

For the item, *Provide evidence, if any, of positive impact of EduSmart in your classroom*, teachers provided examples of how EduSmart stimulated student interest and excitement for science (Student Engagement/Enthusiasm) as well as helped to improve test scores (Higher Scores). Teacher comments are provided in the table below.

Evidence of the Impact of EduSmart
<p><u>Student Engagement/Enthusiasm</u>: <i>The students are excited about starting a science lesson when they realize we are going to use Edusmart</i></p> <p><i>The children were more on task and interested.</i></p> <p><i>Students enjoy the variety.</i></p> <p><i>The students become more involved in the concepts that are provided as opposed to just sitting at their desk...</i></p> <p><i>Students are engaged and enthusiastic about learning science.</i></p> <p><i>This program pushed my children to think and not only that, but they loved it.</i></p> <p><i>...more excitement about tutorials, and more knowledge and a deeper understanding of the concepts...</i></p> <p><u>Higher Scores</u>: <i>Higher test scores...</i></p> <p><i>...They all increased their scores from previous weeks by 10 points.</i></p>

Teachers rated the overall usefulness of EduSmart, on a scale ranging from 1 to 5 where 1 represented the lowest rating and 5 represented the highest rating. Overall, 63.6% (7) of the teachers rated EduSmart as highly useful (mean score of 4.63).

Testimonials

EduSmart collected several teacher and principal testimonials from a few of the schools that had purchased their product. The teacher testimonials revealed two themes, Varied Utility and Higher Scores. For Varied Utility, teachers identified various methods in utilizing EduSmart in their classrooms. Some of the uses for EduSmart included re-teaching tool, use in centers, use for tutorials, and test review. Teachers also identified high scores as a result of EduSmart program. The Principal testimonials focus directly on Higher Scores. The principals all reported increased science scores.

Teacher Testimonials

Varied Utility – *Edusmart Science makes it possible to effectively differentiate science instruction for all learning styles within the same lesson. Effective instructional strategies, such as open-ended questioning, are implemented throughout each module. Using Edusmart Science to support science instruction promotes activating and pre-assessing prior knowledge and the development of vocabulary comprehension with non-linguistic representation and narrated text. The narrated text also linguistically accommodates language for English Language Learners and provides additional support for students who have difficulty comprehending written text. The built in formative assessments allow teachers to readily monitor student mastery, and the graphics are amazing! In addition, Edusmart Science helps teachers who lack a science background to acquire knowledge of science content and concepts. It is without a doubt the best science supplemental resource I have ever seen.* Franki Dockens. Goose Creek CISD. District Elementary Science Specialist

Edusmart Science has been an instrumental part of the huge success of my campuses in HISD. Of the five campuses using Edusmart Science last year, the lowest scored 85% passing while the rest scored 92% passing or higher on the 5th Grade Science TAKS thanks to Edusmart. The commended performance passing percentile showed tremendous increases as the lowest score was 50%.

All my teachers using Edusmart are highly complementary of the software. Their students love the graphics and the way the material is presented. My teachers use Edusmart in many ways: introduce new science content, review and re-teach as well as with tutorials. When a student is absent, teachers place them independently at a computer to review Edusmart material and ‘catch up’ on the content they missed. Prior to the TAKS, our 5th grade teachers reviewed all Edusmart modules covering TAKS Testable TEKS from grades 3–5. It proved to be a fun and powerful review for all of our students that made a big difference.

Edusmart is unique in that it’s a teaching tool FOR teachers. The assessment helps to quickly test student understanding. We are also able to manipulate the software by ‘writing’ on the screen to highlight information we feel important for student learning. My teachers also like the default “stop” in each module. It allows for so many teachable moments to occur. Finally, we love the glossary. Vocabulary words are given in graphic organizer format and the term, definition and a visual (non-linguistic representation) is given so that students can master critical understanding of content vocabulary.

I highly recommend Edusmart Science for all elementary schools, especially those struggling to increase campus science scores or to increase their commended performance scores. HISD: Science Content Specialist

Edusmart Science is a teacher’s dream come true. This virtual resource tool is excellent to enhance teaching, re-teaching, reviewing and assessing student’s knowledge.

I used the Edusmart Science Software to open my Science Tutorials. I believe the videos help build background knowledge in my ESL students.

These units allowed my students to “visit” the Solar System, experiencing not only the incredible mass and energy of the sun, but also becoming very familiar with orbits, phases and other

patterns of change in space.

I confer with our science teacher and plan vocabulary lessons to correlate with the science curriculum being taught at the moment.

Small group setting: a rotation of academic “centers” and Journal writing:

We used EDUSMART in our review time for TAKS.

Higher Scores - We had 87% passing overall and 55% commended performance this year! We're so excited and I know that EDUSMART really helped us!

This year we scored 98% vs. 90% last year. Our commended was 63% vs. 56% last year. We had 16 perfect scores.

Principal Testimonials

Higher Scores - We had 44% commended in 5th grade science which is an improvement over last year.

We did very well on our science scores with an 89% overall. This is an 8 point increase over last year.

We're very pleased with Science!!!! 90% passing 48% commended. The final figures may change after TEA finishes their calculations but we're ecstatic! Our rating for this year is EXEMPLARY!

Summary

This summary is composed of Highlights and Limitations. As of January 2008 to May 2009, 74 Texas schools purchased EduSmart Science. Schools had the software from less than a month to 15 months.

Highlights

In all, the campus level data, teacher survey, and teacher and principal testimonials present positive perspectives of the EduSmart program.

Campus Level TAKS - Of the 28 schools which submitted data, 27 maintained or increased their percentage gains for students passing the Science TAKS. Additionally, 24 of the 28 schools maintained or increased their percentage gains of students scoring commended on the Science TAKS.

Teacher Survey Responses - Of the 11 teachers that responded to the EduSmart Survey, 100% of the teachers agreed or somewhat agreed that EduSmart as a learning resource;

- Was easy to use
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- Produced improved student engagement
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Additionally, teachers highly rated the overall usefulness of EduSmart (4.63 on a 5 point scale) and 80% of the teachers thought that EduSmart fit well with their teaching strategies.

Teachers liked several aspects of the Edusmart program. They enjoyed the formatting and found it easy to follow. They also felt the presentation was engaging to students and kept their attention. This supports Edusmart's simple menu structure for a system that teachers can understand and integrate into their curriculum. These examples support the underlying brain research that elementary students are motivated by a high excitement factor.¹

Teachers reported using two teaching strategies with Edusmart; Use of End of Lesson Quizzes and Re-teaching. They used the quizzes to check for comprehension of the content and the program to re-teach or reinforce objectives. Teachers also described high Student Engagement and Higher Scores as evidence of the impact of EduSmart.

Testimonials

The Teacher and Principal Testimonials support the findings of the Teacher Survey. Teachers reported seeing Higher Scores such as increases in percent passing and commended. They also described the Varied Utility of the EduSmart program among their schools such as for re-teaching, in a "center", for tutorials and test review. Principals focused on higher test scores as a result of EduSmart.

Limitations

This report has several limitations. First, the student data for the 08-09 Science TAKS test and teacher survey data were not representative of all schools using EduSmart. Another limitation is data quality control. For this preliminary report Edumatic Corporation collected the data themselves which may appear biased. Also, the survey data represented a small sample, thereby limiting interpretation and generalizability. Furthermore, documentation of the extent of program implementation was unavailable. Schools' purchase of the software does not ensure use, though, it can imply the possibility.