A Research Report on AWARD Reading Program for First Grade Students in Pittsburg Unified School District, 2010-2011

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Dana L. Grisham, Ph.D., Educational Consultant

In August 2010, a number of the following stakeholders met to plan an investigation of the effects of using AWARD Reading (online version) on the literacy achievement of first grade students in the Pittsburg Unified School District in Pittsburg, CA.

Partners in the collaboration included the Pittsburg Unified School District represented by the following personnel (* at initial meeting):

Pittsburg Unified School District (PUSD)
Linda Rondeau, Ph.D. Superintendent
Bonnie Mozer, After School Program Coordinator

Heights Elementary (PUSD)
Karen Clark, Prinicipal
*Carissa Patague, First Grade Teacher

City of Pittsburg (PACF)
*Marc S. Grisham, City Manager
*Nancy Parent, Pittsburg City Council

AWARD Reading
*Wendy Pye, Publisher of AWARD
Jamie Evans, Consultant
*Shannon Murphy, Consultant
Judy Stevenson, AWARD Liaison

Educational Consultant and Researcher
*Dana L. Grisham, Ph.D., Professor, National University

The project was funded directly by the City of Pittsburg's Pittsburg Arts and Community Foundation (PACF) and AWARD Reading. PACF provided four computers for the classroom at Heights Elementary School and installation was done through the City's technical support team. AWARD Reading provided access to the online program for the first grade teacher, Carissa Patague, and the After School program's instructional aide, Tamekia Moss, as well as teachers' guides and professional development for the program. The school district provided substitute teachers for pre and post-tests and training for the teacher and afterschool personnel. The educational consultant and researcher donated her time for this project.

The project was originally envisaged for the first grade class taught by Carissa Patague, but Superintendent Linda Rondeau requested that first graders in the Heights Elementary

School After School Program be included. The After School Program already had laptop computers sufficient for the project, but technical support providers at the school district upgraded, repaired, and installed software on the laptops.

The timeline for the program:

November 2, 2010
        AWARD Training for Carissa Patague, Tamekia Moss
        Pre-test Assessments of Experiemental, Control, After School Groups

November 3, 2010—January 26, 2011 Pilot Program

January 27, 2011 Post Pilot Assessments

The AWARD Program
AWARD Reading is a preschool through Grade 3 literacy program that "fully integrates technology and print to accelerate reading achievement for all students." However, for this project, the print materials were not used at all; instead, in the classroom the teacher's guide materials were used by a certificated teacher, Carissa Patague, while in the After School program, all work was done online.

A set of CDs of the online program was provided to Heights Elementary in case of an outage of the Internet. No such outage occurred, so that all instruction on the computers occurred online.

AWARD's first grade program includes a set of fiction and non-fiction "stories" that have animation and sound and are interactive for students, scaffolding and reinforcing literacy skills, such as phonics, word identification and vocabulary, and reading comprehension.

Several studies have been conducted with AWARD, primarily through their own agents (see Discussion section of this report), but this study was conducted independently by the researcher.

While AWARD has been used for Response to Intervention (RTI), for ELLs and low-achieving students, it has also been used as an enrichment program in at least one study with positive results.

Heights Elementary School
According to the Pittsburg USD website, Heights Elementary School is one of 7 elementary schools in the Pittsburg USD. The school is housed in an older building, circa mid-twentieth century, but is wired for the Internet. There are approximately 575 students in the school. According to the 2010 School Accountability Report Card (SARC) required by the State of California, data are available for the past three years on the school. For example, the ethnicity of the students for 2008-2009 year was: African-American 13%, Asian 2%, Filipino 3%, Hispanic/Latino 61%, Pacific Islander 3%, and

White 9%. Heights receives Title 1 funding which means that a significant portion of their students are low socio-economic status. Heights is also a "School Improvement" school, as is the Pittsburg Unified School District, because test scores are below the acceptable limit on certain measures of academic achievement by students.

Despite this, however, Heights Elementary School continued to show growth on the State's Academic Performance Index (API) reaching a score of 770 points for the 2009-2010 school year—which ranking is second in the district. The full SARC can be found on the website at http://www.pittsburg.k12.ca.us/heights/generalinfo-aspspn.aspx. According to the website, the school continues to focus on "refining our instructional practices based on data from frequent assessments." The API Scores are shown on Figure 1.

The website also states that, "during the 2010-2011 school year, Heights teachers will focus on teaching our students how to write informative passages. They will teach the students what high/quality writing looks like, and how to become great writers themselves." The focus on writing comes from the assessment data that drives professional development of the teachers.

In the 2010-2011 school year, class sizes increased in the primary grades from 1:20 to 1:25 due to the budget crisis in California.
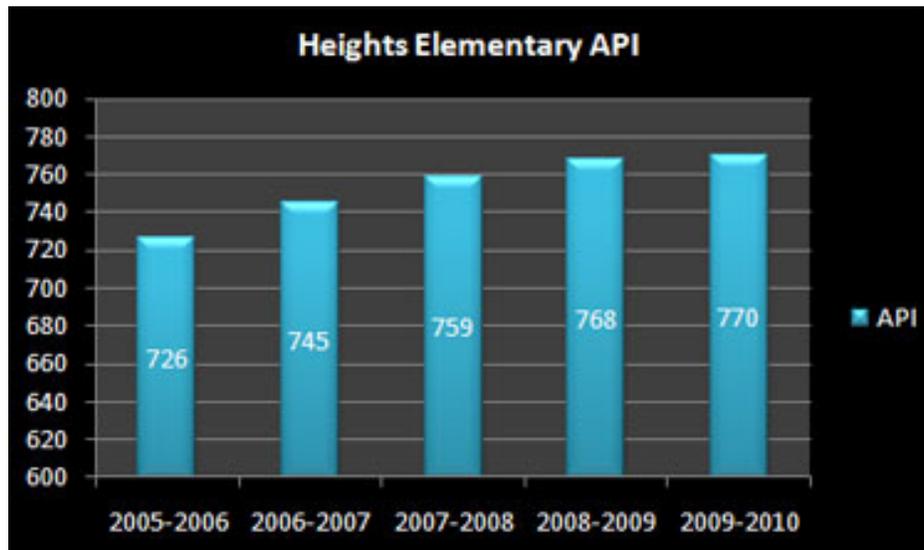

Table 1. API Scores for Heights Elementary School 2005-2010.

The After School Program

All elementary schools participate in the PUSD After School Program. These programs are funded through state and federal grants. The goal is to improve academic achievement and provide safe and healthy environments and activities for students. According to the website, each site participates in:
- Mandatory Homework Hour

- Daily Recreation & Enrichment
- Junior Achievement Programs
- Food Bank of Contra Costa County
- New Kids Program — Nutrition, Exercise and Wellness Programs
- Performing Arts Grant
- Track & Field Events
- Board Game Competitions
- Student performances

The After School Program at Heights Elementary School runs from 2:30 — 6:00 each day after school. The students are supervised by paraprofessionals. In the case of the students in the AWARD program, the primary instructional aide was Ms. Tamekia Moss.

Background

Students born after the millennium are generally credited with being "tech savvy" and recent research suggests today's students may, as a result of the rapid technological changes of this century, be "wired" just a little bit differently than previous generations (Rosen, 2010). Video documentation for young children suggests they are fearless about using technology and appear to have a "feel" for using it. Wagner (2011) suggests that the "net generation" is motivated to learn differently. For example, WMDs (Wireless Mobile Devices) are ubiquitous among school/age children and these children want both to use the latest, fastest technology to meet their learning needs and desire instant gratification (Wagner, 2011). Children are motivated and engaged by the use of technology as shown by HMRI research (Small, Moody, Siddarth, & Bookheimer, 2008).

Children in this study referred to AWARD activities as "games." James Gee (2003, 2008, 2010) has written extensively about learning theory, gaming (both video and online), and popular culture. His recommendations suggest that school activities should be well-planned experiences for children and that part of that experience is the post-experience reflection and discussion about the experience. There is a community aspect to all education that can work for or against what we teach. The use of online teaching resources, such as that provided in the AWARD Reading Online program. has been little investigated in the general literacy research published. For example, the Rand Reading Study Group (2002) found that, "… accessing the Internet makes large demands on individuals' literacy skills; in some cases, this new technology requires readers to have novel literacy skills, and little is known about how to analyze or teach those skills." (p. 4). Indeed, Leu, et al, (in press) argue that reading on the Internet is a defining technology for literacy and learning in the 21st century.

One study (Block & Mangieri, 2009) was conducted on the AWARD Reading Program, and children (K-3) made significant gains on the measures of the program. Four other unpublished studies by AWARD Reading consultants are outlined in the Discussion section of this report. Although they are unpublished reports, the findings presented are uniformly positive.

The Study at Height Elementary School, Pittsburg, CA

The pilot project began on 2 November 2010, when Jamie Evans of AWARD Reading traveled to Heights Elementary School to train participants (Patague, Moss, Mozier, Grisham) and to assist in the pretest assessments for students in Patague's class and other first-grade students at Heights enrolled in the After School Program. Training and most pre-testing were accomplished on November 2. On November 5, Carissa Patague completed the balance of pre-testing. All student participants were first grade students.

On November 3, the implementation of AWARD ReadingOnline began.

Experimental Group

The experimental group in Carissa Patague's first grade class consisted of 10 students of 24 in the classroom, a purposive example of the lowest achieving students in the group. These students were divided further into two groups for the pilot, based on test scores. One group received instruction and computer time in the Yellow materials; the other group received instruction and computer time in the Red materials. Two students in the control group were not included in the study because they were later additions to the classroom.

Ms. Patague used the Teacher's Edition of the AWARD ReadingOnline program to provide differentiated small group instruction to both sets of students (referred to as "Red" or "Yellow" students).

Heights Elementary is a Title 1 school with a prescribed basal series and a pacing guide that teachers must follow for Reading/Language Arts. There is a similar program for mathematics instruction. Therefore time was limited for the use of the supplemental AWARD program. Ms. Patague designed a workshop period of 45 minutes four times per week (M, T, W, TH). While the control group students worked on basal materials and other independent assignments, the experimental group met with the teacher or worked on the computers. The schedule follows:

Table 2. Schedule for Experimental Group

Date	Time	Red Group	Yellow Group
Monday-Thursday	1:45-2:05 pm	Computer	Small Group
	2:05-2:25 pm	Small Group	Computer

A timer was used for students to know when to switch from computers to small groups and vice versa. The classroom teacher worked from the Teacher's Guide to provide scaffolded and differentiated small group instruction to the two experimental groups. Table 3 shows an example of Ms. Patague's planning documents that were created for each week of the pilot project.

Table 3. Planning Document for Week of 11/29-12/03

AWARD WORKSHOP 11/29-12/3	
RED	YELLOW
ES: "Donald the Dragon" -Activate Background, p. 260 -Picture Wlk -Phonemic Awareness /d? p. 261	"Listen to the Egg" -retell, p. 158 -/cr/ blend Lettergetter CD p. 159
GD: Comprehension/Retell, p. 264 -Phonemic Awareness, p. 265 -Phonological Awareness, syllables, p. 269 -Make words, p. 270 (letters d, o, t, s)	-/cr/words -Letter Combination /cr/ "Crazy Crocodile" CD
URS: "Look at Me, Mom!" -Build Background, picture walk - -ook family	"Don't Rock the Boat" -retell, p. 174-176
Retell p. 282 -Sight word "down" - -ump family	- /sw/ words - CD Letter Combination "My Swing"

Ms. Patague and Ms. Moss (After School Program) also kept records daily of student attendance and participation in the pilot project over the length (11/2/10 through 01/28/11).

Control Group

As noted, the Control Group did not participate in the AWARD ReadingOnline Program except for pre- and post-testing. During the workshop time on Monday through Thursday they worked independently (with teacher supervision) on other language arts activities from the basal series.

The After School Program

The students in the after school program received a different implementation of the AWARD ReadingOnline Program. The After School Coordinator, Bonnie Mozer, was present for the training at the beginning of the project. The instructional aide, Tamekia Moss, was also present for part of the time. Because Ms. Moss is not a certificated teacher, she did not use small group instruction with the Teacher's Edition, although she had a copy and referred to it from time to time.

The After School students came from one of four first grade classrooms at the school. Two students, one experimental, one control, were from Ms. Patague's class. Danielle, who was in both the experimental and the afterschool group, will be considered as a separate case because she received both treatments.

In the After School program, students worked for 60 minutes per day, Monday through Thursday. For the first half hour, all students worked together on the Yellow materials

regardless of their assessment levels. For the second half hour, the students all worked on the Red materials, regardless of assessment levels. Ms. Moss took steps to ensure that all students moved through all materials at the same rate (they waited when a student needed more time on a particular component, then moved on together as one group). Because they had sufficient computers for every first grade child in the after school program, the time spent on the AWARD ReadingOnline program was significantly higher than the experimental group and no small group instruction was provided.

Observations

During the pilot study, the educational consultant visited the school on two occasions for observations, spending 45 minutes (entire time) in the experimental classroom and about an hour in the After School Program. Observation notes were recorded for the visits. From these notes and from interviews conducted with both Ms. Patague and Ms. Moss, the format of the implementation was drawn.

Post-Testing

Jamie Evans of AWARD returned on January 27, 2010, for the post-testing. During pre-testing and post-testing, the classroom teacher, Carissa Patague, was provided with a substitute teacher to participate in the assessments. Dana Grisham was present also on both occasions. Post-testing was essentially completed on January 27, 2010. After School students from other first grades were post-tested on the same day in Ms. Patague's classroom.

A Word About Assessments

All assessments were done online using the Teacher Entry portal into the assessments. Initially, students in the control group were selected based upon DIBELS scores, but these did not prove sound diagnostics, so researchers used their "best guess" initially for the pre-testing levels and adjusted accordingly, when necessary.

For the post-testing, the same level as the pre-test was administered to all students.

Interviews

On January 27, 2011, researchers interviewed the classroom teacher (Carissa Patague) and After School instructional aide (Tamekia Moss) about their experiences with the AWARD ReadingOnline program. The adult interview protocol is provided as Appendix A.

On the same date, the educational consultant interviewed eight of the children from the Experimental and/or After School Groups. The interview protocol is provided as Appendix B and responses are summarized in Appendix C.

All interviews were audiotaped and MP3 files created. The researcher listened to the recordings several times, writing down quotations (where used) and providing analysis of the interview data for the findings.

Findings

In terms of the differences between the pre-test and post-test assessment data, there was notable growth of the experimental group students over those in the control group. Comparatively, the experimental students almost doubled the amount of growth in 3 of the four areas of reading that were measured. It is remarkable that this growth occurred in just 8 weeks, with two holiday periods included.

Although the treatment was considerably different, the After School group children also made impressive gains.

Figure 1 shows the pre- and post-test percentages for the Experimental, Control and After School groups on Sounds, Words, Writing, and Reading Comprehension. When viewing the overall percentages of growth, it is important to remember that the Experimental Group was a purposive sample of the lowest achieving students, while the After School group was a convenience sample of the entire group enrolled in the After School program.

Figure 1. Overall Percentage of Growth of Experimental, Control, and After School Groups

Sounds

Group	Average % November	Average % January	Overall % of Growth
Experimental	46.6%	70%	+23.4%
Control	46.4%	64.2%	+17.8%
After School	25.9%	56.6%	+30.7%

Words

Group	Average % in November	Average % January	Overall % of Growth
Experimental	47.5%	47.5%	0%
Control	21.4%	21.4%	0%
After School	13.9%	47.2%	+33.3%

Writing

Group	Average % November	Average % January	Overall % of Growth
Experimental	54.2%	65.1%	+10.9%
Control	48.5%	42.8%	-5.7%

After School	49.6%	62.6%	+13%

Comprehension

Group	Average % November	Average % January	Overall % of Growth
Experimental	60.5%	62.5%	+2%
Control	57.4%	55.4%	-2%
After School	37.7%	53.1%	+15.4

This growth is shown in another way by looking at only the post-test averages for each of the groups (see Figure 2 below). Experimental group students outperformed the control group on all measures.

Figure 2. Post-test Averages (%) for Experimental, Control, and After School Groups (Across all levels)

Group	Sounds	Words	Writing	Comprehension
Experimental	70	48	65	62
Control	64	46	57	58
After School 1*	70	65	69	62
After School 2*	40	25	54	42

* After School 1 and After School 2 were combined for the growth scores shown in Figure 1.

In the following figures we may examine the pre-test to post-test results more closely for the experimental group. In some cases the actual scores from the pre-test were overwritten by the post-test. The researcher has provided the actual numbers achieved in the post-test so that the reader may see what constitutes the percentages for each item—in most cases one or two questions and answers.

EXPERIMENTAL GROUP COMPARISONS

Figure 3. Pre-/Post-Test Comparison of Experimental Alphabet Assessment

Alphabet Assessment 1/27 Experimental Group				
Name	Lower Case Letter Names 11/2010	Lower Case Letter Names 01/2011	Letter Sounds 11/2010 (%)	Letter Sounds 1/27
Aaron	22 (85)	22 (85)	(81)	15 (58)
Ethan	26 (100)	26 (100)	(96)	23 (88)
Steven	26 (100)	26 (100)	(92)	23 (88)
Mele	-- (63)	23 (88)	(42)	21 (81)
Esmeralda	--(92)	21 (81)	(96)	18 (69)
Jesse	26 (100)	26 (100)	(96)	24 (92)
Mariana	26 (100)	26 (100)	(96)	25 (96)

Danielle*	26 (100)	N/A	(96)	20 (77)
Jose	23 (88)	N/A	(96)	25 (96)
Jazmin	24 (92)	NA	(96)	24 (92)

Names (Alphabet Assessment)	Initial Sounds 11/2010 in %	Initial Sounds 01/2011 Actual and (%)
Aaron	(77)	23 (88)
Ethan	(92)	25 (96)
Steve	(96)	24 (92)
Mele	(50)	26 (100)
Esmeralda	(81)	24 (92)
Jesse	(96)	25 (96)
Mariana	(96)	25 (96)
Danielle*	(88)	21 (81)
Jose	(92)	26 (100)
Jazmin	(96)	25 (96)

* Danielle was in both the Experimental and After School groups

Experimental Group: Assessment Results on ESSENTIAL WORDS

Figure 4. Pre-/Post-Test Comparison of Experimental Group Essential Words

Comparison of **Essential Words** Experimental Group		
Name	November 2010 Level 3/4(%)	January 2011 Level 4 %
Aaron	58/(42)	50
Ethan	100/(58)	83
Steven	100/(83)	92
Mele	42/ (50)	58
Esmeralda	58/(25)	50
Jesse	92/ (42)	83
Mariana	92/(75)	67
Danielle*	100/(75)	83
Jose	100/(83)	100
Jazmin	92/ (42)	50

Experimental Group: Assessment Results on STORIES

Figure 5. Pre-/Post-test Comparison of Experimental Group Stories Comprehension

Comparison of **Comprehension** Experimental Group	

Name	November 2010	January 2011 (Average 62%
Aaron (Yellow)	60	40
Ethan (Yellow)	80	100
Steven (Yellow)	80	80
Mele (Yellow)	40	0
Esmeralda (Yellow)	40	40
Average Yellow	60	52
Jesse (Blue)	80	100
Mariana (Blue)	63	75
Danielle (Blue)	25	38
Jose (Blue)	75	63
Jazmin (Blue)	63	88
Average Blue	61	73

Figure 6. Experimental Group Stories Sounds

Comparison of **Sounds** Experimental Group		
Name	November 2010	January 2011
Aaron (Y)	50	50
Ethan (Y)	67	83
Steven (Y)	67	67
Mele (Y)	50	83
Esmeralda (Y)	33	83
Average Yellow	53.4	73.2
Jesse (B)	33	67
Mariana (B)	33	33
Danielle*(B)	33	100
Jose (B)	67	67
Jazmin (B)	33	67
Average Blue	39.8	66.8

Figure 7. Experimental Group Stories Words

Comparison of **Words** Experimental Group		
Name	November 2010	January 2011
Aaron (Y)	50	50
Ethan(Y)	100	100
Steven (Y)	100	50
Mele (Y)	50	50
Esmeralda (Y)	50	50

Average Yellow	70	60
Jesse (B)	25	50
Mariana (B)	25	0
Danielle* (B)	25	25
Jose (B)	25	50
Jazmin (B)	25	50
Average Blue	25	35

Figure 8. Experimental Group Stories Writing

Comparison of **Writing** Experimental Group		
Name	November 2010	January 2011
Aaron (Y)	43	86
Ethan (Y)	71	86
Steven (Y)	71	71
Mele (Y)	43	57
Esmeralda (Y)	14	71
Average Yellow	48.4	74.2
Jesse (B)	60	60
Mariana (B)	60	20
Danielle*(B)	40	60
Jose (B)	80	80
Jazmin (B)	60	60
Average Blue	60	56

Figure 9. Experimental Group Loss Categories

Experimental Group Loss Categories	
Name	Category
Aaron (Y)	Letter sounds
Ethan (Y)	Letter sounds
Steven (Y)	Letter sounds, initial sounds, words in stories
Mele (Y)	Comprehension
Esmeralda (Y)	Lower case letter names, letter sounds
Jesse (B)	Letter sounds
Mariana (B)	Words in stories, Essential words (Level 4), writing
Danielle*(B)	Letter sounds, initial

	sounds
Jose (B)	Comprehension
Jazmin (B)	Letter sounds

In the following section, the control group pre- and post-test assessments are compared on Alphabet, Essential Words, and Stories. Through an error in testing, many of the alphabet assessments were not tested in post testing. Where there was 100% on the pre-test, students were not retested.

CONTROL GROUP COMPARISONS

Figure 10. Control Group Alphabet Assessments

Alphabet Assessment 1/27/11 Control Group		
Names	Lower Case Letter Names 11/2010 %	Lower Case Letter Names 2/2011 %
Ezekial (Yellow)	100	100
Sophia	92	100
Mikera	100	100
Andrea	100	92
Stefani	100	100
Erica	100	100
Anupriya	96 (needs p)	96 (needs u)
Destin	96 (needs m)	100
Chandlor	100	100
Isabella	100	Not tested
Akil	96 (needs a)	96 (needs b)
Hika	81 (needs n, o, t, y, z)	Not tested
Veronica	100	100

Alphabet Assessment 1/27/11 Control Group		
Names	Letter Sounds (Not tested)	Initial Sounds (Not tested)
Ezekial (Yellow)	Not tested	Not tested
Sophia	Not tested	Not tested
Mikera	Not tested	Not tested
Andrea	Not tested	Not tested
Stefani	Not tested	Not tested
Erica	Not tested	Not tested
Anupriya	Not tested	Not tested
Destin	Not tested	Not tested
Chandlor	Not tested	Not tested

Isabella	Not tested	Not tested
Akil	Not tested	Not tested
Hika	Not tested	Not tested
Anastasia	Not tested	Not tested

ASSESSMENT RESULTS ON ESSENTIAL WORDS (CONTROL)

Figure 11. Control Group Essential Words Assessments

Essential Words 1/27/11 Control Group		
Names	Essential Words 11/10 Level 3	Essential Words 02/11 Level 3
Ezekial (Yellow)	100	89
Sophia	100	100
Mikera	92	83
Andrea	100	100
Stefani	92	92
Erica	100	100
Anupriya	100	100
Destin	100	100
Chandlor	83	92
Isabella	92	Not tested
Akil	100	92
Hika	92	Not tested
Veronica	100	100

CONTROL GROUP STORIES ASSESSMENT

Figure 12. Control Group Stories Sounds

STORIES (Sounds) 1/27/11 Control Group		
Names	Nov 2010	Jan 2011
Ezekial (Yellow)	Not tested	83
Sophia (Green)	75	75
Mikera (Green)	Not tested	50
Andrea (Green)	50	25
Stefani (Green)	0	75
Erica (Green)	75	25
Anupriya (Green)	25	75
Destin (Blue)	Not tested	33
Chandlor (Yellow)	Not tested	100
Isabella (Green)	Not tested	75

Akil (Green)	75	100
Hika (Blue)**	67	33
Veronica	67 (Blue); 25 (Green)	75 (Green)

** Also tested at Green level; scores not shown

Figure 13. Control Group Stories Words

STORIES (WORDS) 1/27/11 Control Group		
Names	11/10	01/11
Ezekial (Yellow)	Not tested	100
Sophia (Green)	50	100
Mikera (Green)	Not tested	50
Andrea (Green)	50	0
Stefani (Green)	0	0
Erica (Green)	0	0
Anupriya (Green)	50	50
Destin (Blue)	Not tested	25
Chandlor (Yellow)	Not tested	100
Isabella (Green)	Not tested	50
Akil (Green)	0	50
Hika (Blue)**	25	25
Veronica	25 (Blue); 0 (Green)	0 (Green)

Figure 14. Control Group Stories Writing

Stories (Writing) 1/27/11 Control Group		
Names	11/10	01/11
Ezekial (Yellow)	Not tested	43
Sophia (Green)	80	60
Mikera(Green)	Not tested	80
Andrea (Green)	40	40
Stefani (Green)	60	40
Erica (Green)	60	60
Anupriya (Green)	40	40
Destin (Blue)	Not tested	80
Chandlor (Yellow)	Not tested	71
Isabella (Green)	Not tested	60
Akil (Green)	20	40
Hika (Blue)**	80	80
Veronica	60 (Blue); 40 (Green)	20 (Green)

Figure 15. Control Group Stories Comprehension

Stories (Comprehension) 1/27/11 Control Group		
Names	11/10	01/11
Ezekial (Yellow)	Not tested	20
Sophia (Green)	67	89
Mikera (Green)	Not tested	67
Andrea (Green)	33	44
Stefani (Green)	56	44
Erica (Green)	67	44
Anupriya (Green)	44	67
Destin (Blue)	Not tested	75
Chandlor (Yellow)	Not tested	60
Isabella (Green)	Not tested	78
Akil (Green)	56	67
Hika (Blue)**	33	50
Veronica	63 (Blue); 44 (Green)	33 (Green)

Figure 16. Control Group Loss Categories

Control Group Loss Categories 1/27/11	
Names	Stories Only
Ezekial (Yellow)	
Sophia (Green)	Writing
Mikera (Green)	Essential Words
Andrea (Green)	Words
Stefani (Green)	Writing, Comprehension
Erica (Green)	Sounds, Comprehension
Anupriya (Green)	
Destin (Blue)	
Chandlor (Yellow)	
Isabella (Green)	
Akil (Green)	
Hika (Blue)**	Sounds
Veronica (Green)	Writing, Comprehension

AFTER SCHOOL PROGRAM

PLEASE NOTE THAT THERE ARE TWO AFTER SCHOOL PROGRAMS, BUT THEY HAVE BEEN COMBINED FOR THE PURPOSES OF THIS ANALYSIS.

Figure 17. After School Program Alphabet Assessment

Alphabet Assessment I 1/27/11

AFTER SCHOOL GROUPS (I AND II)		
Names	Letter Names 11/10	Letter Names 01/11
Emanuel (I) (Yellow)	100	Not tested
Gonzalo (I) (Green)	96 (needs q)	Not tested
Sabrina (I) (Blue)	100	Not tested
Dreya (I) (Blue)	100	Not tested
Yami (I) (Blue)	100	Not tested
JaMar (II) (Green)	82 (needs f, n)	Not tested
Jennifer (II) (Green)	100	Not tested
Lauryn (II) (Yellow)	85 (needs g, i, l, r)	Not tested
Leslie (II) (Blue)	100	Not tested

Alphabet Assessment II 1/27/11 AFTER SCHOOL GROUPS (I AND II)		
Names	Letter Sounds	Initial Sounds
Emanuel (I) (Yellow)	Not tested	Not tested
Gonzalo (I) (Green)	Not tested	Not tested
Sabrina (I) (Blue)	Not tested	Not tested
Dreya (I) (Blue)	Not tested	Not tested
Yami (I) (Blue)	Not tested	Not tested
JaMar (II) (Green)	Not tested	Not tested
Jennifer (II) (Green)	Not tested	Not tested
Lauryn (II) (Yellow)	Not tested	Not tested
Leslie (II) Blue	Not tested	Not tested

AFTER SCHOOL ESSENTIAL WORDS

Figure 18. After School Program Essential Word Assessments

Essential Word Assessments (Level 3) 1/27/11 AFTER SCHOOL GROUPS (I AND II)		
Names	11/10	01/11
Emanuel (I) (Yellow)	83	92
Gonzalo (I) (Green)	100	92
Sabrina (I) (Blue)	100	100
Dreya (I) (Blue)	100	92
Yami (I) (Blue)	83	92
JaMar (II) (Green)	83	100

Jennifer (II) (Green)	92	92
Lauryn (II) (Yellow)	67	75
Leslie (II) (Blue)	100	83

AFTER SCHOOL GROUP STORIES COMPARISON

Figure 19. After School Program Stories Sounds

Stories Assessment—Sounds 1/27/11 AFTER SCHOOL GROUPS (I AND II)		
Names	11/10	01/11
Emanuel (I) (Yellow)	50	50
Gonzalo (I) (Green)	25	100
Sabrina (I) (Blue)	0	67
Dreya (I) (Blue)	33	67
Yami (I) (Blue)	0	67
JaMar (II) (Green)	25	25
Jennifer (II) (Green)	0	50
Lauryn (II) (Yellow)	67	50
Leslie (II) (Blue)	33	33

Figure 20. After School Program Stories Words

Stories Assessment--Words 1/27/11 AFTER SCHOOL GROUPS (I AND II)		
Names	11/10	01/11
Emanuel (I) (Yellow)	0	100
Gonzalo (I) (Green)	0	50
Sabrina (I) (Blue)	25	75
Dreya (I)(Blue)	50	50
Yami (I) (Blue)	0	50
JaMar (II) (Green)	0	0
Jennifer (II)(Green)	50	50
Lauryn (II) (Yellow)	0	0
Leslie (II) (Blue)	0	50

Figure 21. After School Program Stories Writing

Stories Assessment—Writing 1/27/11 AFTER SCHOOL GROUPS (I AND II)		
Names	11/10	01/11
Emanuel (I) (Yellow)	57	86
Gonzalo (I) (Green)	40	60
Sabrina (I) (Blue)	60	60
Dreya (I) (Blue)	80	60
Yami (I) (Blue)	60	80
JaMar (II) (Green)	20	40
Jennifer (II) (Green)	40	40
Lauryn (II) (Yellow)	29	57
Leslie (II) (Blue)	60	80

Figure 22. After School Program Stories Comprehension

Stories Assessment—Comprehension 1/27/11 AFTER SCHOOL GROUPS (I AND II)		
Names	11/10	01/11
Emanuel (I) (Yellow)	40	80
Gonzalo (I) (Green)	67	56
Sabrina (I) (Blue)	25	75
Dreya (I) (Blue)	38	63
Yami (I) (Blue)	25	38
JaMar (II) (Green)	33	44
Jennifer (II)(Green)	33	44
Lauryn (II) (Yellow)	40	40
Leslie (II) (Blue)	38	38

Figure 23. After School Group Loss Categories

After School Group Loss Categories 1/27/11	
Names	
Emanuel (I)	
Gonzalo (I)	Essential words, comprehension
Sabrina (I)	
Dreya (I)	Essential words, writing
Yami (I)	
JaMar (II)	
Jennifer (II)	
Lauryn (II)	Story sounds
Leslie (II	Essential Words

In the next section, the researcher presents data analysis from qualitative (interview) data from adult participants—Carissa Patague, the Experimental teacher and Tamekia Moss, Instructional Aide for the After School Program. In addition, eight first graders were interviewed for their perspectives on the AWARD program. The section begins with a quote from Ethan, who was particularly articulate about the AWARD program.

Interviews with First Grade Children:
"It Can Make People Read Better." (Ethan, Age 6)

Interviewing young children is always a challenge, but during the AWARD program at Heights, both the children in Ms. Patague's class and the children in the After School program had gotten used to me being in their classroom and talking to them. They were eager to talk about AWARD for the most part—only one child, Esmerelda, being silenced by the prospect of being recorded, so for her I turned off the recorder and made notes. The others, even self-styled "shy" Jesse, had no problems talking with me about the program and their experiences or being audio-recorded while we were talking. I was able, in the time provided, to conduct interviews with eight children, six of whom were in the experimental group, while three were in After School. Danielle was in both the Experimental Program AND the After School Program. Mykera was in the control group in Ms. Patague's room and in the After School Program, the only child to be in both groups. She did not do the AWARD program in her regular class, but only in the After School Program. One other child, Danielle was a true "double dipper" in that she was in the Experimental group in Ms. Patague's classroom AND in the After School program.

Every single child that I interviewed expressed their liking for the AWARD ReadingOnline program. Mykera (control group in room 4, but also in after school) stated that she "loved it." Moreover, for 6-year-olds, the children were both amazingly

articulate and pretty specific about what they liked most—naming their favorite features specifically, like LetterGetter, WordSlurper, and Mighty Writer. Several mentioned the stories and "games" (activities) and some named specific stories that they liked. All children interviewed found the AWARD program relatively easy to learn; the After School group had to log in and Mykera mentioned that it was hard to learn to spell Pittsburg and Heights. All the children interviewed also stated that they would recommend AWARD to their friends and would like to work with them on the program. Ethan wanted to know if there was a way to log in from home.

When asked what they thought they had learned, the responses varied a little, but children could and did say that they thought they learned to read better by working with AWARD. Danielle, a "double-dipper" who was in both the experimental group in Ms. Patague's class and in the After School Group, mentioned directly that she got to do it twice, once in room 4 and once in room 25 (after school).

From the perspective of "affect," then, the AWARD program was a success with the children.

Teacher Interview and After School Aide Interview

I interviewed both the After School Instructional Aide (Tamekia Moss) and the first grade teacher (Carissa Patague) after school on the day of the post-testing (January 27, 2011), audio-taping both interviews, listening to them several times, and making notes for this report. They were not transcribed, but, like the students' interviews, are available on MP3 files for confirmation of these findings.

Both Ms. Patague and Ms. Moss are eager to continue with the AWARD program, stating that they both really liked using the program. Both are hoping that their supervisors will agree to purchase the program for their continued use.

Ms. Patague

If there is one thing that Carissa would do over, it would be to have more time to learn the program. Training for using AWARD in this program was limited to one day—November 2, 2010, and much of that day was also taken up with the pre-test assessments. In addition, Ms. Patague was learning a new basal reading/language arts program mandated for her district, as well as a new writing instructional program. Ms. Patague expressed her desire and the efforts she made (twice in the interview) to implement the AWARD program in the "right" way.

Her schedule was tight, but Carissa found time in her daily schedule to dedicate to the program four days per week (Monday through Thursday) at the end of the instructional day—from 1:45 to 2:30 p.m. For this dedicated period of time, which she termed "workshop," the control group children were busy with independent practices from the new basal series and some other work they could do on their own. Ms. Patague expressed that she "felt bad" that the control group were unable to experience the AWARD program except for the pre- and post- assessments.

For the pilot, ten experimental students were divided into two skills groups of 5 students each. One group, the five lowest achieving students worked on the Red Level (late Kindergarten) materials. Another group of 5, achieving slightly higher, worked on the Yellow Level (early first grade) materials. Ms. Patague worked from the print Teacher's Edition of AWARD to plan small group instruction for each group. For example, on Monday, she might work with Red Group to prepare them for the next story in the series, while the Yellow Group were working on their stories/activties on the computer. She set a timer, so that children became accustomed to switching stations when it sounded. Then Yellow Group students would meet with Ms. Patague, while Red Group went to computer stations to work on their stories/activities. Ms. Patague handled this well, but expressed that managing the control group's work and the small group instruction, prevented her from overseeing more fully what occurred when the children were online. She stated that having another person in the classroom would have freed her to observe and guide children's computer use more closely.

To assist her with planning, Ms. Patague read the Teacher's Guide and made abbreviated notes (see Figure X) to guide her small group instruction. She stated that toward the end of the pilot program, she no longer needed to do this, because she grew to know the program better. She did comment that small group instruction was awkward because children were grouped around one computer, with "nothing tangible" in their hands, which led them to be somewhat inattentive and/or jostle for position to see better. During our discussions it was suggested that if she had an LCD projector, she could amplify the images for these students and this might be better—they could touch the screen, for example to point out answers during instruction.

Ms. Patague was quite enthusiastic about the children's literacy learning as a result of using the AWARD program. She named several students whom she felt were exemplars of the learning: Ethan, Danielle, and Jesse. Ethan "bloomed" during the program. At first he talked only about how well he did in math. After a couple of weeks he started volunteering to read and his confidence in his reading was increased dramatically. He might come up to her and say, "Let me read this to you!" Children's academic progress was confirmed by post-test assessments.

Ms. Patague felt that the program was "easy" for students to navigate and although she did not have to use them, she felt reassured by having the CDs as a backup. She appreciated the color bands of the program and stated that once she posted the charts (Red and Yellow levels) and showed the students' progress with stickers, it was easier for everyone to follow—"even my little Esmeralda." Ms. Patague felt comfortable after about two weeks that she was "doing the program correctly" and if she has access for the next year, she would plan and work with small groups sooner, and she would hope to do it earlier in the school day, as she felt late afternoon meant students were tired and ready to go home.

The teacher expressed particular appreciation for the activities following the stories, which the students seemed to regard as "games." She talked about how excited they were and how she felt good seeing how easily they could do their work independently and she stated that there was no evidence of the students getting tired of the program. She

mentioned that Danielle, who was in both the experimental group and the After School group, never tired of having to repeat the programs—and felt that the repetition was confidence building, particularly for Danielle who struggles with literacy learning.

Ms. Patague felt the training might have been extended a little so that she could have "played with the program more" before actually implementing it. She felt the pacing was fast, but that two stories per week (with attendant activities) worked well and provided the children with instruction to "fill holes in their learning." She wished that she had more time, but the 20-minute increments were "do-able" and because she could not observe the students at the computer closely, she directed them to read each selection at least four times. If they had extra time, they could choose and activity from the Alphabet to do.

Finally, the teacher mentioned how special the children felt to be able to work on the computer.

Ms. Tamekia Moss

In the After School program, the AWARD program was implemented by an instructional aide rather than by a credentialed teacher. There were other differences in the pilot program also, beginning with access to technology. The After School program had laptops for each first grade child in the program. Children in the After School program had one hour per day, four days per week (Monday through Thursday) for the AWARD ReadingOnline Program. Like the Experimental Group, children in After School, completed two "stories" per week, one at the Red Level and one at the Yellow Level. All children moved through the AWARD program at the same level and at the same time, regardless of their assessment levels. This meant that four days per week, Ms. Tamekia would direct them through first a Red level story and activities for one half hour; then, children were directed through a Yellow level story and activities for the second half hour (period was from 5-6:00 p.m.).

Ms. Moss felt that the children benefitted greatly from the AWARD program and was gratified to hear of positive post-test assessment results. Children move in and out of the after school program, therefore only nine first-graders who began the pilot ended in the pilot, but all made gains in their literacy skills. Some of these children were more advanced but the practice at their independent reading levels seemed to benefit them.

With regard to the ease of use of AWARD, Ms. Moss stated that navigation was not a problem for the students and that the only difficulty for the first graders was logging in, spelling Pittsburg and Heights (in student interviews, Mykera mentioned how hard this was). She also named students she felt particularly gained from the experience: Jamar, Lauryn, and Danielle, speaking to each of their needs and how the program built their confidence.

The challenge of implementing the program was answered with the remedy of moving children through the program simultaneously. There was no small group instruction. Ms.

Moss felt it was "easier for me and for them" to move together through each lesson, waiting until everyone present had completed each step (e.g,, they all completed two readings of the story) before moving on together to the next step (such as LetterGetter) and completing that one before moving to the next. "It seemed to work well for them and for me," she stated. Eventually, after the December 2010 mid-point meeting, she moved to have them remove headsets and read selections orally to her. Since they had already read the selection, this was not a "cold" reading.

Ms. Moss "liked the whole program!" and thinks it very beneficial to students. She stated that students really liked AWARD and loved being on the computers. She also noted that being in AWARD improved student behaviors, because being on the computers was regarded as a privilege that they did not want to lose. (Note: Lauryn in her interview mentioned that you might lose computer time if you "were bad.") Ms. Moss said that as a result of AWARD, she "had no behavior problems with first graders."

Ms. Moss was satisfied with the pacing, except when "special events" happened to disrupt the schedule. She also noted that students, if they finished early were allowed to select a story and activity of their choice to do (both Mykera and Danielle noted that they liked this). Ms. Moss said that she appreciated how helpful it was to collaborate with Ms. Patague and to attend the training and planning meetings. She felt comfortable with the implementation and she was pleased that she had my email address (and that of Jamie Evans of AWARD) if she needed assistance. She stated that she felt the pilot program went "very smoothly" and that her supervisor was talking of extending that and adding a license for the third graders in the after school program.

Summary of Interview Data

Teacher interview data from Ms. Patague suggests that she found the AWARD ReadingOnline program to be effective and relatively easy to use. Although she found it challenging to learn the ARO program (along with a new basal reading series and a new writing program for the district), she stated that she found the pilot to be all she had hoped for in terms of meeting the needs of her students, especially the lowest-achieving members of her classroom community. Ms. Moss found a way to implement the AWARD program without small group instruction, but with additional time on the computer and was very pleased with the program and student outcomes

Students in the Experimental and After School groups remained enthusiastic about the program after the pilot period. None expressed boredom or disinterest. All could name favorite aspects of the AWARD program and almost all could articulate how the program was helpful to them in school.

Discussion of Findings

Because the nature of the first grade classroom (Experimental and Control groups) implementation of the AWARD ReadingOnline pilot differed dramatically from the implementation of AWARD in the After School program, we must discuss the findings separately before deciding if there are common themes among the data sets.

Prior to that, it is helpful to review several previous studies done with AWARD ReadingOnline. Although all of the preceding studies used both print and technology, this pilot is the first to use only the online component of AWARD, so findings may not be directly compared.

The first (Block & Mangieri, 2009) took place in New York City Schools over an entire year with teachers in different classrooms as experimental or control group teachers. Pre and post-test data were analyzed using statistical measures (ANCOVA) and experimental students outperformed control students on most measures and ELL students in the experiemental group outperformed their control group counterparts on most measures. An interesting finding of the Block and Mangieri study was that the method of delivery (pull out, push in, after school) did not have significant differences in academic outcomes. Essentially, the multi-faceted nature of AWARD (rather than a linear, hierarchical presentation of skills) demonstrated significant gains while engaging students with literacy in a more engaging format.

The second study, piloted over five weeks in San Diego (Stevenson, Jerome, Dorest, Matuku, Bailey, Heicklen, and Johnson, 2009), was an intervention program of 30 minutes outside of the literacy block (as with the Heights pilot). Training for the teachers was more intensive, lasting over a week. The study took place in Kindergarten, Grades 1, 2, and 3, rather than in grade 1 only (as with Heights). Unlike Heights, students had print materials in addition to the online program. Students spent 15 minutes per day online. As with the Block and Mangieri students, the Stevenson, et al, students showed growth expressed in percentages for every assessment.

In an 11-week study in Nassau, New York (Long Island), led by Judy Stevenson (2010a), again, intervention students had instruction with printed materials and 15 minutes per day were spent on the computers. As in the previous studies cited, impressive growth was shown for all academic areas across the grades, K-3.

A fourth study, again led by Stevenson (2010b) in Prince George County over one month, followed similar models as previous studies with the use of print materials and 15 minutes online, and again students demonstrated an "overall positive improvement" due to the intervention project.

At Chesterbrook Academy in North Carolina (Stevenson, et al, 2010c), the Nobel Learning Communities used AWARD as an enrichment program in two Kindergarten classes in the same arrangement of small group (print) and independent time at the computer (15-20 minutes per day). Again, students showed strong gains from pre to post testing.

The final study in Arizona (Kirkpatrick, Dorset, & Matuku, 2010), was conducted in essentially the same manner and showed gains for most students in the study.

In contrast to the prior studies, the Pilot Study at Heights Elementary in Pittsburg, CA utilized only the online portions of the AWARD program. Students in the Experimental

group had small group instruction for 15-20 minutes per day from their certificated teacher using plans from the printed teachers' guide, then 15-20 minutes per day on computers provided by PACF. The After School students (9 first graders were present for the entire pilot program) had no small group instruction but did have approximately 60 minutes per day of time on the computer with the AWARD program, supervised by the instructional aide.

Both the experimental and the after School groups made excellent academic progress from pre- to post-assessments as show in Figure 1 and other figures in this report. It appears that despite limitations (such as absences, errors in assessments of some students) the impact of AWARD ReadingOnline on first grade students' academic achievement is extremely positive. At this time, Pittsburg city officials (PACF) are conducting talks with the district about future directions for the program.

While the classroom teacher provided an amazing fidelity to the AWARD program, she worked under circumstances that are prevalent in virtually every classroom in the U.S., similar to directing a three-ring circus. Despite this challenge, her lowest-achieving students showed strong academic growth as a result of the pilot. Danielle, who participated in AWARD in both Experimental and After School program, grew in every area but letter sounds and initial sounds. Danielle is problematic because of these almost inexplicable losses, but she gained substantially in all other areas.

A question that arises for the researcher is that of the gains of the After School program, because there was little or no small group instruction and there was little attention paid to individual differences, in that all students were moved through the set program at the same time and the same pace. Did the engaging nature and multi-faceted approach to skills learning scaffold children's growth, or as Allington suggests, increase their reading at their instructional or independent levels?

The project at Heights continues through the month of February 2011, at least, although it is to be hoped that it will continue through (and be expanded) the balance of the 2010-2011 school year. The AWARD Reading Program appears to be a promising resource for K-3 classrooms that may be used in different manners (such as intervention or enrichment) with differing implementations (print and online v. online only), with diverse populations of children, and with varying amounts of teacher support, as was the case in this pilot. In particular, it is important to investigate further with AWARD Reading in After School settings.

References

Allington, R.L. (2009). What really matters in Response to Intervention. San
Francisco,CA: Allyn & Bacon.

Block, C.C. & Mangieri, J. N. (2009). A research investigation to assess the AWARD Reading Program's effectiveness in developing literacy achievement for Kindergardten to grade 2 students.

Gee, J. P. & Hayes, E. R. (2010). Women and gaming: The SIMS and 21st Century learning. New York: Palgrave-MacMillan.

Gee, J.P. (2008). Learning theory, video games, and popular culture. In K. Drotner & S. Livingstone (Eds), The International Handbook of Children, Media and Culture, (pp. 196-213). London, UK: Sage.

Kirkpatrick, K., Dorset, W., & Matuku, S. (2010). AWARD intervention report on a five-week study in Paradise Valley Unified School District, Arizona. Unpublished report.

Leu, D. J., Zawilinski, L., Castek, J., Banerjee, M., Housand, B. Liu, Y., and O'Neil, M. (in press). What is new about the new literacies of online reading comprehension? In A. Berger, L. Rush, and J. Eakle (Eds.) *Secondary school reading and writing: What research reveals for classroom practices*. Chicago, IL: NCTE/NCRLL.

Rosen, L. D.,with Carrier, L. M and Cheever, N. A. (2010) *Rewired: Understanding the iGeneration and how they learn*. New York: Palgrave-MacMillan.

Small, G.W., Moody, T.D., Siddarth, P., & Bookheimer, S. Y. (2009). *American Association for Geriatric Psychiatry, 17*, 2, 116-126.

Stevenson, J., Dorset, W., Matuku, Bailey, Heicklen, Johnson, and Jerome, P. (2009). AWARD intervention report on a five-week study in San Diego. Unpublished report.

Stevenson, J., Dorset, W., Matuku, S. Jerome, P. Pierce, L. (2010). AWARD reading report 11-week study Nassau County Long Island New York. Unpublished report.

Stevenson, J., Dorset, W., Matuku, S., Lawson, M. & Vance, G. (2010). AWARD intervention report on a five-week study in Prince George County. Unpublished report.

Stevenson, J., Jerome, P. Dorset, W., Matuku, S., Barron, E., & Starnes, L. (2010). AWARD Reading Report on a five-week study at Chesterbrook kAcademy Nobel Learning Commun ities North Carolina. Unpublished report.

Wagner, T. (2011). Learning, leading, and teaching in the 21st Century. Presented at the 28th Learning and the Brain Conference, February 2011, San Francisco, CA.

Appendix A. Interview Questions for Teacher and After School Aide

1. How well do you think ARO (AWARD ReadingOnline) met the needs of your student?
2. What were your biggest challenges in implementing the program?
3. Which of your students do you think benefited most from ARO?
4. What technical difficulties did you experience with ARO?
5. How easy was ARO for your students to use?
6. How easy/hard was it for you to plan and use ARO?
7. Are there any aspects of ARO that you especially like?
8. Are there any aspects of ARO that you feel need improvement?
9. How was the pacing? Too fast, slow, just right? (2 stories per week)
10. Experimental: Was 20 minutes appropriate for their levels? (Red; Yellow)
11. After School: Was the hour appropriate for the students?
12. Experimental: What other support materials would have been helpful for the online only use?
13. If purchased, would you continue to use?
14. What else would you like to tell us about the experience?

Appendix B. Interview (Students)
1. What did you like best about AWARD Reading Online?
2. How hard was it to learn to use the computer?
3. Do you have a computer at home? Do you get to use it?
4. Do you use another computer—like at a friend's house or at the library?
5. What was your favorite game/activity on AWARD?
6. How do you think AWARD has helped you at school (learning to read)?
7. What would you tell other kids about AWARD?

Pittsburg AWARD Pilot, 30