

Notes on the following two Lori Vogt Action Research papers:

Lori Vogt is a veteran kindergarten teacher in Arizona. Both years reflect the AZ State Standard area of Language Arts. Because there is no prior testing of kindergarten students, teachers start “ground zero.”

Lori began an Action Research Project in her Kindergarten classroom in the 2000 - 2001 school term. She was new to Zoo-phonics, and quite honestly, very happy with the program she was using. She was urged to try Zoo-phonics by her colleagues. She had no idea of the impact that Zoo-phonics was going to make on her students and her teaching.

In 2001 – 2002, she did a follow up Action Research Project using Zoo-phonics as her sole Language Arts Program.

What is the difference between the first year and the second year?

- 1) Using two different phonics programs concurrently in the same year
- 2) Having no training until January 2001. Inexperienced with Zoo-phonics materials and methodology.
- 3) Having few Zoo-phonics materials with which to teach
- 4) Having no pre-conceived ideas regarding Zoo-phonics
- 5) A letter a week was taught until Zoo-phonics was begun.

“Even though I am incorporating other elements into the Language Arts curriculum, I will continue to use my existing base of Jill Cauldron’s Letter People and their accompany stories I our traditional “letter of the week” program.” Lori Vogt

What are the constants?

- 1) Same teacher
- 2) Same aged students
- 3) Similar/same demographics (ethnic/economic)
- 4) Using only Zoo-phonics as the phonemic awareness/phonics program from Day 1.
- 5) The second year the teacher began to incorporate all aspects of language arts, not just “a-z” or basic words.

“This year I have expanded my collection of [Zoo-phonics] materials immensely. To begin with, I am streamlining this portion of the language arts curriculum by only using the Zoo-phonics Animals....Multi-modal approaches to learning are key. Reaching our students where they are at and bringing them as far as they can go should be the goal of educators...If we do not allow this to happen, our classrooms will become stagnant, dull, and dry. Our children will lose out on windows of opportunity that may quite literally be closed forever.” Lori Vogt, 2001 - 2002

**Classroom Improvement Project
Action Research**

2000-2001

**Lori Vogt
Grade: Kindergarten
Westwind Elementary
Pendergast School District
Phoenix, Arizona**

Step 1: Focusing the Inquiry

As a Level III Career Ladder educator for the Pendergast School District, I am focusing my efforts for this Classroom Improvement Project on the content area of Language Arts once again. For the past two years, I have written Level III plans involving this area. I have concentrated on alphabet identification, including both upper and lower case letters. I feel that a strong foundation of sound/symbol relationships is vital to a student's success in reading as well as all other subject matters. Although I feel the Kindergarten program has many important and successful elements, I still believe that this is an area in need of constant improvement.

Since beginning my educational career at Westwind in 1993, I have seen a great deal of growth and change in our Language Arts Curriculum, especially within the past two years. The Arizona State Standards first came to light for us as a staff through the introduction of the Language Arts Standards. Since then, we have been exposed to the other content areas that now total nine (although there are officially 13). Our school is following the Balanced Literacy Program, with Mary Belle McCorkle as our professional consultant. We have received extensive training and follow-up support on the various elements of this program. One that has been of particular concern to me is guided reading groups.

As a Kindergarten teacher, I quite honestly have found it rather difficult to successfully implement guided reading groups into my existing curriculum. I have wondered if some change to our existing program may smooth out this problem. I believe that one vital area that may hold the key is phonics instruction.

Being trained as a whole language educator in my certification program at the University of Washington in Seattle gave me a very negative viewpoint about phonics towards the beginning of my career in teaching. However, as I have gained more experience and training in the field, I now believe in the value of a strong element of phonics instruction in the early years of school, including Kindergarten. I am very concerned still, though, about the manner in which phonics is taught. I whole-heartedly believe in developmentally appropriate teaching practices, and refuse to do anything in my classroom that will rob my students of the opportunity to grow as children.

Therefore, my focused inquiry is in the content of Language Arts. The specific state standard is Language Arts 1: Reading. The content cluster for SAT9 scores is "sounds and letters." My students are not involved in taking the SAT9 tests, so I do not have access to these scores. However, I have tracked letter identification percentage growth with my classes for the past two years through my Student Achievement Plan and will be using this to compare my statistics for this school year.

Step 2: Formulating a Question

Coming into this new plan, I feel like my question is multi-faceted. I want my Balanced Literacy guided reading groups to begin earlier in the year and run smoother. I want my students to be able to identify the upper and lower case letters sooner and make those connections to the letter sounds. I strongly desire my class as a whole to move out of the “pre-reading” stage sooner without causing stress or tension in my room, within my students, or among my parents. I feel it is extremely important for Kindergarten teaching to be developmentally appropriate. Young children especially need to move, to be physically involved, and to be actively engaged in learning for their learning to be optimized.

Zoo-phonics is one such program that I believe will help meet this need. I have heard about it sporadically throughout my teaching career, but have never had the opportunity to implement it in my classroom. This year at one of our district-wide Kindergarten meetings, Kinder Klub, I heard very positive feedback about this program. I understand that there are very measurable results with children’s learning, very much in line with what I am hoping to achieve this year. It seems very developmentally appropriate, with heavy emphasis on kinesthetic learning. Although this is the specific program I have begun to research and utilize in my classroom, I believe there may be others like it as well. I intend to continue to use it while exploring other similar avenues. Even though I am incorporating other elements into the Language Arts curriculum, I will continue to use my existing base of Jill Cauldron’s letter people and their accompanying stories in our traditional “letter of the week” program.

At this time, my action research question is:

What new phonics-based instructional strategies can I implement to accelerate my Kindergartners’ reading readiness?

Step 3: Review of Literature and Resources/Developing the Action Plan

There is a great deal of current literature and research related to my area of investigation. To begin with, the *Zoo-phonics* catalog and brochure highlighted some excellent research, including findings by the creators of the program itself. I have found a great deal of literature about various aspects of the program by utilizing a variety of search engines on the web. Doing an ERIC search through the web proved very beneficial also and uncovered numerous research articles that I was unable to uncover anywhere else. Interviews with some Kindergarten teachers in our district have validated the success of the program. Most importantly, primary research from my very own classroom with my own students has been the key component to cementing my belief that *Zoo-phonics* does indeed work to help children become independent readers and writers.

The creators of *Zoo-phonics* are Georgene Bradshaw, Charlene Wrighton, and Irene Clark who developed this method in 1984. They began using this kinesthetic approach to teaching phonics with their special education students in their classrooms in California. The program grew into a multi-faceted one that included speaking, hearing, seeing, moving, and touching components. It is a developmentally appropriate method of teaching phonics, reading, and spelling using real literature which has proven successful with a variety of students including those who are in regular education, gifted, Title I, Special Education, and in ESL settings. The program has been widely field-tested, and the creators themselves have won numerous national and international awards. The three have branched out to train other educators who in turn have taken it to their classrooms to experience the success of the program with their own students. Other teachers have commented:

"...It was nothing less than a miracle."

Janet Fodor, Preschool, Sp. Ed., Honolulu, HI

"Our 'Zoo-phonics Kids' placed in the 90th percentile ranking in our SAT results!"

Jackie Colbert, Principal, Phoenix Elem., Folsom CA

The first issue that seemed relevant to my topic was the validity of teaching phonics at all in early education and its exact place in our curriculum. Although it seems that the field of education has a tendency to swing to the left and right, it always seems to settle back in the middle eventually. We can see that is exactly what has happened with the issue of phonics. Reflecting back to the times of the Dick and Jane series, we as educators (and students!) may recall the drudgery and ineffectiveness of this strict method of teaching the letters and sounds in isolation. Then, whole language came into vogue, and unfortunately many teachers avoided teaching any kind of phonemic awareness at all. As Charlene Wrighton so rightly expressed, "It really wasn't 'whole' without phonics." (1995) We now realize that phonics and whole language can be taught concurrently. We must pay attention, honor, and validate that children learn most effectively through a variety of teaching strategies including the best elements of phonetic instruction masterfully interwoven into a print-rich whole language classroom. A balanced approach to reading instruction is crucial.

Research shows that phonemic awareness is the best predictor of the ease of early reading acquisition, even above IQ, vocabulary, or listening comprehension (Stanovich, 1993-94). Adams (1990) describes five levels of phonemic awareness:

- 1) To hear rhymes and alliteration as measured by knowledge of nursery rhymes
- 2) To do oddity tasks
- 3) To blend and split syllables
- 4) To perform phonemic segmentation
- 5) To perform phoneme manipulation tasks

Then we must ask ourselves within our classrooms what is the best way to bring about this phonemic awareness for our students. It is obvious that knowledge of our letters is the first building block of this foundation.

Our alphabet is a series of 52 symbols, including both upper and lower case letters. As fluent readers, this may seem basic since it is something most of us have mastered and have been using for quite some time. However, for nonreaders (our students), mastery of this system is a daunting task. We not only expect our Kindergartners to recognize their names but also the sounds they make as well. Their brains are truly not developed enough physically to make these connections. Symbols are abstract and left-brained which is the side that develops second (Wrighton, 1995).

There are ways that we can help them help our students become masters of their own alphabet. The key lies in the brain and how it is making connections. Research has shown that there are “significant associations between reading proficiency and right hemispheric activity at early ages, to shift to significant associations between reading proficiency and left hemispheric activity at later ages” (Flehmig & Stern, 1986). Systematically feeding phonemic information into the right side of the brain in a way that makes sense to the Kindergartner is the key to success in reading and writing. Since our letters are symbols, which are left-brained, we must use something that causes the child to make connections (Ehri, Deffner, & Wilce, 1984). The *Zoo-phonics* animals provide the perfect pictorial mnemonics to achieve this goal. There are three stages: 1) the animal alone; 2) the animal and the alphabet letter together; and 3) the letter symbol alone.

Children are pattern seekers and pattern makers (May, 1990). This phonics program not only takes advantage of this fact, but also utilizes every facet of a child’s learning to help them absorb the alphabet names and sounds. The children *see* the pictorial mnemonic mentioned above. There is a body signal done that stimulates the nervous system and both sides of the brain. The child *hears* and *sees* the letter sound and symbol also. In his comparative research, Rohwer found that the best connective for remembering words were meaningful “actor-action-object” relationships (1966). *Zoo-phonics* is truly a multi-modal approach that takes advantage of children’s natural tendency to want to move.

All of the above secondary research is thorough, convincing, and overwhelmingly supportive of this method of teaching phonics. However, my strongest motivation for wanting to try it came from hearing other Kindergarten peer teachers rave about the results they were experiencing within their own classrooms. Bunny Sutton, a Kindergarten teacher from Desert Mirage, told her story of one little boy who finished the whole year only knowing a handful of letter names and two letter sounds. She instituted *Zoo-phonics* into her summer school class, and this same little boy had mastered all of the letter names and most of the sounds before he started first grade. One story like that would have been enough to convince me. However, I heard numerous others like it from her and other Kindergarten teachers in the district. I couldn’t wait to try it myself. We had just completed our first quarter of school, and I was quite amazed at the success I was seeing in my own classroom. The children absolutely adore the animals and their alphabet sounds. I still taught under the guise of the “letter of the week” program but infused this pro-

gram into my existing curriculum. There are very few children who did not master the letter names and sounds of the letters we covered in our sequence.

The instructional strategies that have been used in our Kindergarten program have been an eclectic mix that has changed and been adapted over the past eight years that I have taught here. However, literature as the heart of the curriculum is one foundation to which I strongly hold that has not changed at all. At the heart of my educational philosophy is the belief that all children, particularly at a young age, should be read to often. A love of reading, a desire to learn, and a sincere motivation to read is critical to instill as early as possible in a child's life. It is a foundation that is felt deep within a person that will set the tone for their emotional, academic, and social response to school for an entire lifetime.

With that philosophical belief as a foundation of my teaching, I read to my children as much as possible throughout the day. Activities are rarely introduced without several fiction and non-fiction literary pieces to support them. To teach phonics, I primarily draw the information out of these literary pieces which are rich in content and provide a high degree of motivation and enrichment for the children. We have always taught thematically within the framework of a "letter of the week" program. For example, if we are doing a unit on bears, letter Bb will be the focus for the week. The letter is introduced on Monday with a character from Jill Cauldron's letter people program. B.B. Bunny is the star for letter Bb for instance. I read a short eight-frame story that is filled with words beginning with the featured letter. The class listens to the story and then participates in brainstorming as many words on the letter chart that begin with the letter. Correct letter formation is taught through direct instruction. The students practice both upper and lower case formation on their hands, in the air, on each other's backs, and finally on paper.

There are two major changes I implemented in my Language Arts curriculum this year. One letter a week was still being highlighted, but they were introduced in alphabetical order. Early in the school year, it became quite obvious this method was successful as the children could review what we had studied and got very excited for the letter that was coming next. This method of introducing the letters seemed to work much better for both the sequential and the random learners. The second and most significant change was introducing the *Zoo-phonics* program. With the introduction of Cauldron's letter character on Monday, I also introduced the pictorial mnemonic for *Zoo-phonics*. For example, Bubba Bear is the character for letter Bb. I used the second step letter which is the merged animals/letters set. The children seemed to be catching on to the sounds component much earlier this year. The creators of *Zoo-phonics* desire the alphabet to be introduced as a whole and not to be segmented as we continued to do in our "letter of the week" curriculum. Although one letter a week is the focus, I introduced the entire alphabet via the *Zoo-phonics*. One of the creators details every gesture that accompanies the letter sound and then goes over the entire alphabet fluently. We watched this video about twice a week for the first semester and reviewed all the letters on a consistent basis.

Step 4: Collecting Relevant Data

Assessment was accomplished through daily observation and report cards. As the primary teacher, I saw the children learning the alphabet names and sounds quickly and eagerly. It would be obvious to any observer that the kinesthetic approach to learning phonics worked in my class. The whole-brain approach is ideal when the eyes, ears, mouth, and hands are involved in the learning.

Official data collection occurred quarterly, in line with our district report card periods. Each child was called back individually to a quiet area in the class and asked letter names, both upper and lower case, as well as their sounds. There were four sets of data collected in October, December, February, and May. Since the first data set was collected in October, there is no true baseline information available. The students began school on August 14th. The assessment sheet that was used follows this section. Sounds were assessed with this phrase: "What sound does 'A' make?" or "What does 'B' say?" Very little wait time was allowed and no *Zoo-phonics* signal prompts were given at all.

The AM and PM Spreadsheets detail the percentages of letter names and sounds known for each child and for each quarter. For example, AM Student #8 scored a 39% for 1st quarter which means she identified 20 out of 52 letter names. AM Student #2 scored a 50% for letter sounds for 3rd quarter data set which signified he knew 13 of the 26 letter sounds. "WD" means the child withdrew from my class during that quarter. AM Student #18 was the only one who left during the data set collection periods. No AM students enrolled during the year. PM Student #2 was withdrawn January 29th. PM Student #14 moved on February 2nd. PM Student #24 enrolled on February 13th. PM Student #25 started on March 19th.

The three bar graphs represent some interesting details about the data collection. Graph #1, "% of Letter Sounds Known", shows the averages for the AM and the PM classes for each quarter. So, for the 4th quarter data collection set, my students knew 92% of the letter sounds on average. Graph #2, "% of Letter Names Known", details this set of data for this year in comparison to the previous two school years. Graph #3, "% Change of Letter Names Known", shows the growth between each quarter as well as the overall progress and compares it to the previous two years.

A.M. Class 2000-2001

Student	1 st qtr ABC %	1 st qtr Sound %	2 nd qtr ABC %	2 nd qtr Sound %	3 rd qtr ABC %	3 rd qtr Sound %	4 th qtr ABC %	4 th qtr Sound %
1	4	4	8	8	19	23	31	46
2	25	8	54	19	81	50	100	96
3	4	4	15	12	98	96	100	100
4	4	0	6	12	27	19	33	23
5	96	46	100	100	100	100	100	100
6	100	100	100	100	100	100	100	100
7	75	19	96	92	100	100	100	100
8	39	4	87	81	100	100	100	100
9	71	11	94	62	100	92	100	100
10	33	38	60	73	96	96	100	100
11	37	31	48	65	77	92	98	88
12	27	42	63	88	92	100	100	100
13	13	0	13	0	27	0	38	0
14	92	19	98	85	98	100	100	100
15	67	23	100	100	100	100	100	100
16	77	23	100	96	100	100	100	100
17	100	65	100	100	100	100	100	100
18	13	0	WD	WD	WD	WD	WD	WD
19	50	23	87	85	100	100	100	100
20	54	31	83	77	92	100	100	100
21	35	19	88	81	100	100	100	100
22	100	50	100	100	100	100	100	100
23	62	8	83	77	85	89	87	100
24	89	15	98	73	100	96	100	100
25	42	15	83	85	100	100	100	100
26	90	23	100	100	100	100	100	100
27	8	0	21	42	100	100	100	100
28	81	19	96	92	100	100	100	100
29	100	46	100	96	100	100	100	100
30	10	8	19	58	37	85	67	92

1998-1999

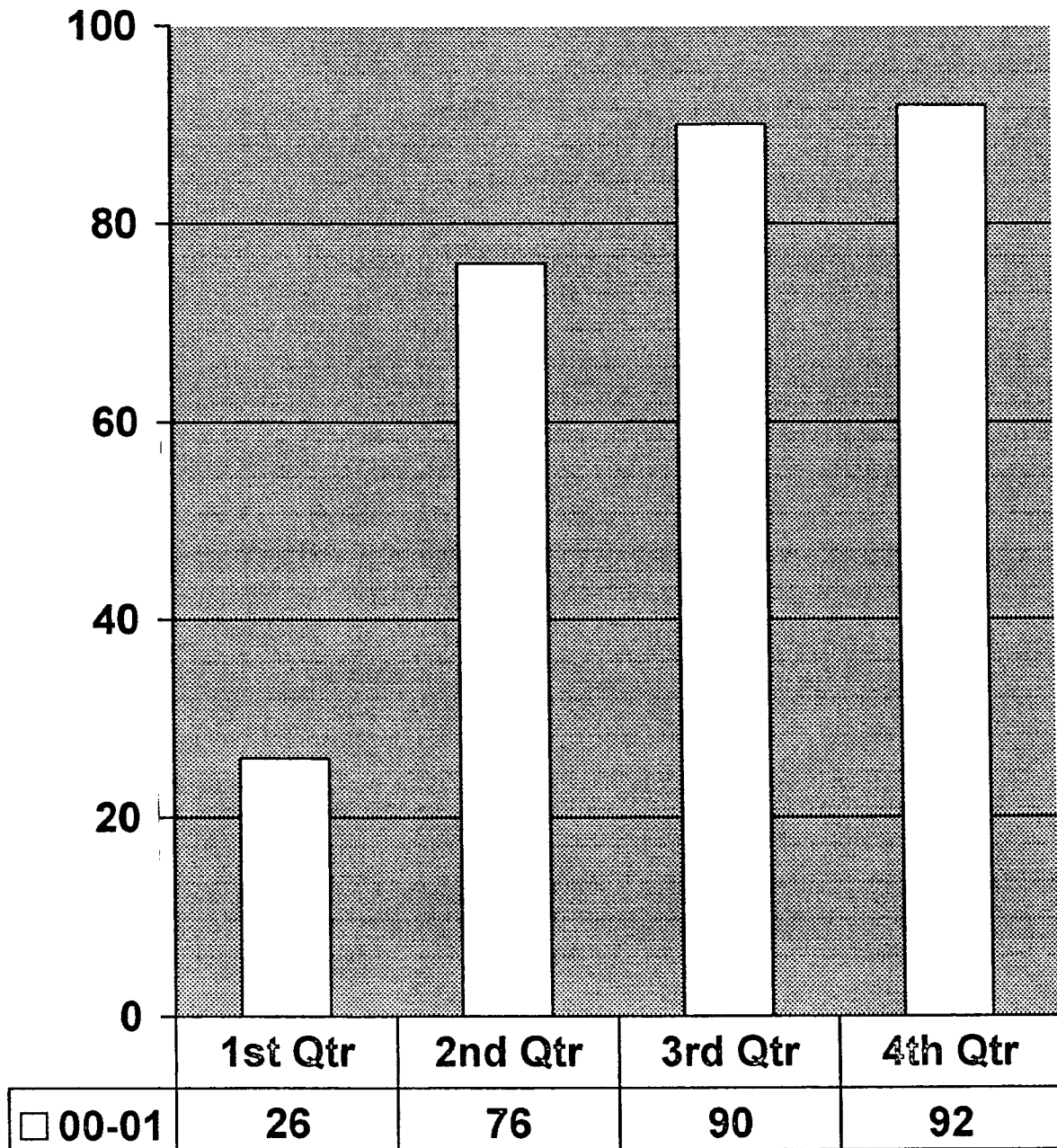
Student Profile Goal #1: Strategic Plan Goal The students will be able to recognize and name the upper and lower case letters of the alphabet.						
Student	Special Needs	Pre-Assessment	Benchmark 1	Benchmark 2	Post-Assessment	Met Goal
1		40%	83%	98%	100%	Yes
2		6%	42%	87%	100%	Yes
3		96%	100%	100%	100%	Yes
4		37%	71%	100%	100%	Yes
5		56%	81%	100%	100%	Yes
6		10%	17%	21%	48%	No
7		89%	92%	100%	100%	Yes
8		85%	98%	100%	100%	Yes
9		100%	100%	100%	100%	Yes
10	LEP	2%	10%	19%	38%	No
11		100%	100%	100%	100%	Yes
12		98%	100%	100%	100%	Yes
13		92%	98%	100%	100%	Yes
14		85%	100%	100%	100%	Yes
15		98%	100%	100%	100%	Yes
16	LEP	2%	10%	33%	60%	No
17		2%	15%	65%	89%	Yes
18		52%	100%	100%	100%	Yes
19	LEP	0%	19%	46%	100%	Yes
20		10%	17%	23%	25%	No
21		94%	100%	100%	100%	Yes
22		100%	100%	100%	100%	Yes
23		100%	100%	100%	100%	Yes
24		100%	100%	100%	100%	Yes
25		100%	100%	100%	100%	Yes

1999-2000

Student Profile Goal #1: Level III Goal The students will be able to correctly differentiate and classify the upper and lower case letters of the alphabet.						
Student	Special Needs	Pre-Assessment	Benchmark 1	Benchmark 2	Post-Assessment	Met Goal
1		54%	60%	88%	100%	Yes
2		13%	13%	25%	48%	No
3		0%				
4		6%	26%	79%	100%	Yes
5		100%	100%	100%	100%	Yes
6	LEP	4%	31%	96%	100%	Yes
7		13%	24%	56%	77%	No
8		50%	67%	100%	100%	Yes
9		15%	39%	86%	100%	Yes
10	SP	100%	100%	100%	100%	Yes
11	SP, LD	2%	4%	8%	15%	No
12		21%	53%	86%	100%	Yes
13		94%	100%	100%	100%	Yes
14	SP, LD	10%	22%	52%	100%	Yes
15		17%	27%	63%	90%	Yes
16		33%	68%	96%	100%	Yes
17	SP	15%	19%	35%	60%	No
18		42%	55%	75%	100%	Yes
19		96%	100%	100%	100%	Yes
20		38%	59%	85%	100%	Yes
21		13%	17%	37%	63%	No
22		100%	100%	100%	100%	Yes
23		94%	100%	100%	100%	Yes
24		79%	96%	100%	100%	Yes
25		10%	12%	25%	60%	No

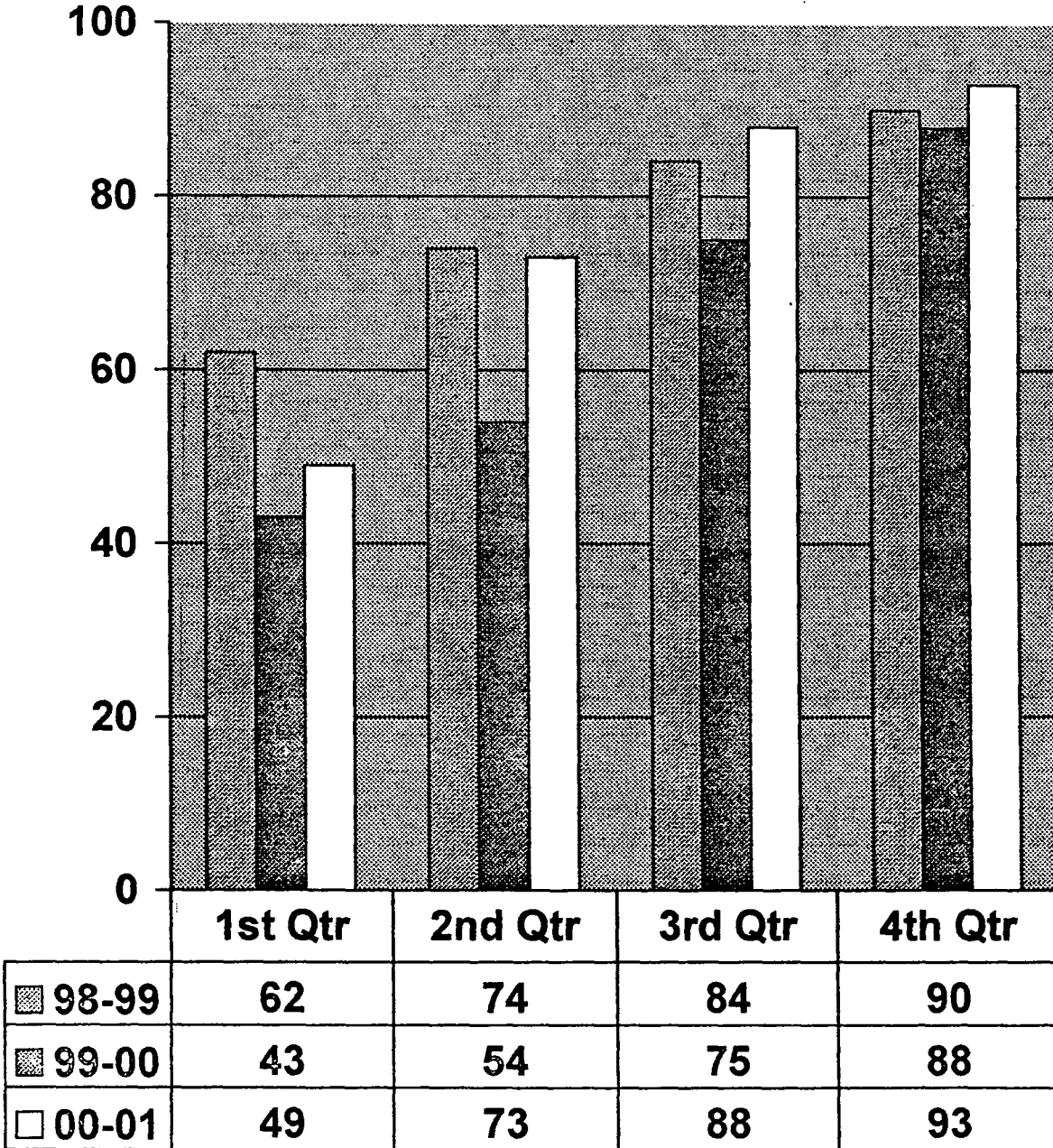
#1
% of Letter Sounds Known

□ 00-01



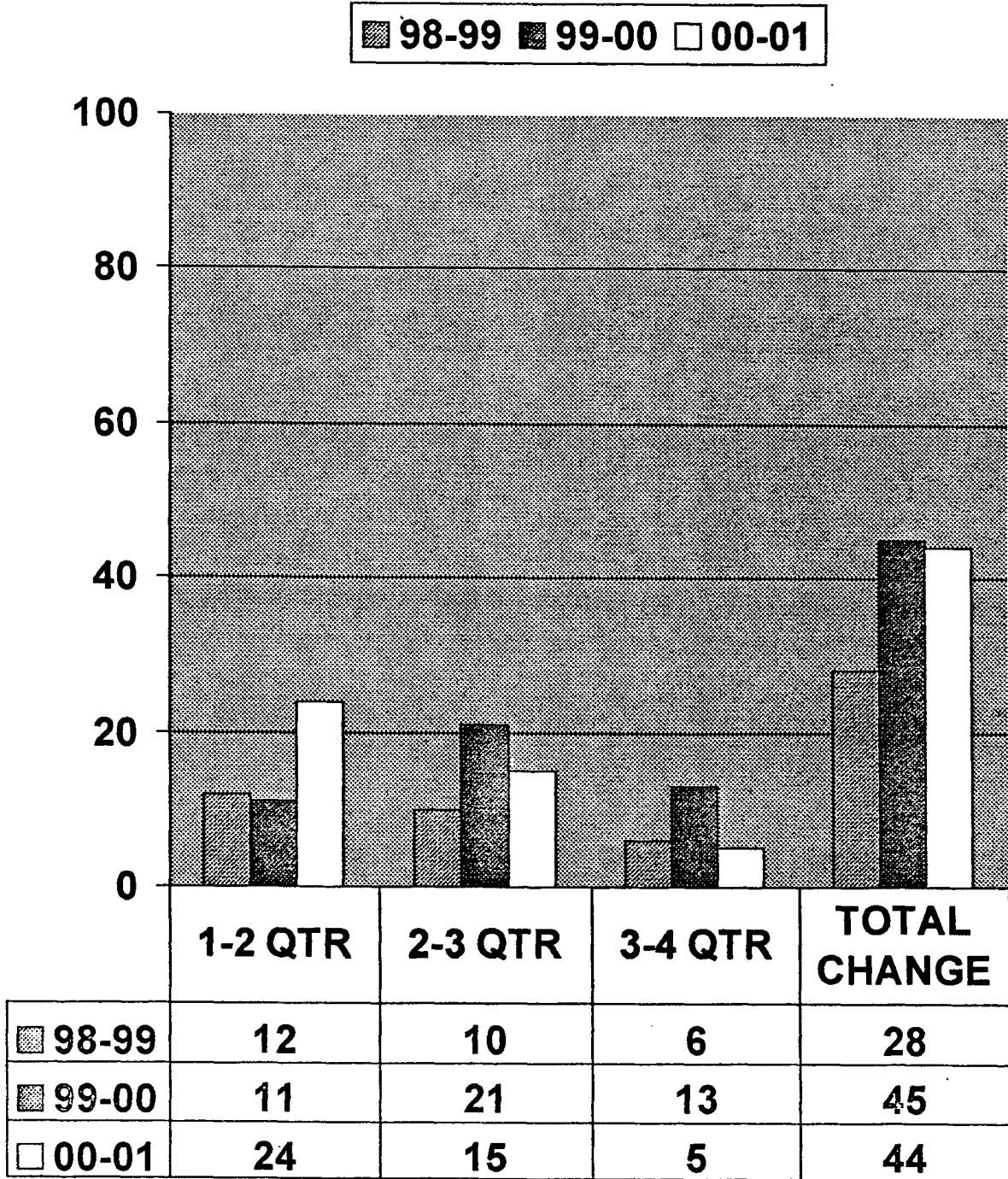
#2
% of Letter Names Known

■ 98-99 ■ 99-00 □ 00-01



#3

% CHANGE of Letter Names Known



Step 5: Analyzing and Interpreting the Data

The first analysis will be of the AM Spreadsheet. At the first data collection, only four of my students knew all the letter names and only one could identify 100% of the letter sounds. By the last quarter, 23 students knew all the letter names and sounds. Even the six who did not achieve 100% made significant progress though.

- Student #1 grew 27% in letter names and 42% in sounds.
- Student #2 grew to 96% in sounds, almost to 100%.
- Student #4 grew 29% in letter names and 23% in sounds, from not knowing one single sound. His absences have been excessive. The mother reports bizarre behavior and numerous emotional outbursts, although none have been exhibited in the school setting.
- Student #11 grew 61% in letter names and 57% in sounds. He is receiving speech therapy. His behavior has been erratic and his language quite garbled most of the time, although vast improvements have been noted. The parents refuse any further testing beyond speech services.
- Student #13 grew 25% in letter names, but made no gains in sounds. He and his mother have both reported several instances of domestic violence, and the father is supposedly receiving counseling. His social, emotional, and academic skills have progressed very slowly this year.
- Student #23 grew 25% in letter names to 87% and did achieve 100% for sounds. She is enrolled in an extremely enriching, academic preschool for the other half of the day.
- Student #30 grew 57% in letter names and 84% in sounds. This household is headed by an older single father with two other children. There has been a history of domestic violence and inter-state custody battles. The father reports that this child was physically exposed to illegal drugs as a baby.

The second analysis is of the PM spreadsheet. For the first data set, two students knew all the letter names and only one knew all the sounds. By the last data set, all the children except for three could identify every letter, and every one except for five achieved 100% for sounds.

- Student #1 grew from only knowing 15% of the sounds to 92% which is quite close to 100%. She is the youngest in her large family, and her parents even expressed a great deal of concern if she was ready for Kindergarten. Up until early spring, she was even continuing to drool and suck her fingers.
- Student #12 grew 52% in letter names and 62% in sounds. There have been no Read Alouds sent in for this child which are lists of books read at home. Parent interaction has been minimal. His mother reports taking in several cousins from a home in California in which the parents are incarcerated. There have been as many as nine children residing in the home at one time. The older brother received academic assistance in first grade through our tutor program.
- Student #17 grew 29% in letter names and 38% in sounds. His sister was in my class last year and the similarities are numerous. They both are extremely quiet, interacting very little with the other children or with adults. He is quite uninterested in reading, but has made some promising gains.
- Student #24 enrolled on February 24th. He did catch on fairly quickly to the *Zoophonics* signals and letter characters. He made a 17% gain in letter names and an 11% gain in sounds between the 3rd and the 4th reporting periods. His family is blended with his parent and stepparent working more than full-time jobs. He is often left in the

care of older siblings, aunts, and grandparents at various locations.

- Student #25 did not come into our class until March 19th. He could identify 100% of the letter names, but only 50% of the sounds. He was not exposed to *Zoo-phonics* in his other school and had a hard time assimilating it into his knowledge base with so little time left in the year.

Bar graph #1 shows the average percentage of letter sounds known for the two classes. For the first data set, the students only knew 26% of the letter sounds as a whole group. By the fourth data set, they knew 92% of the letter sounds. This graph is probably most representative of the impact of the *Zoo-phonics* program as the emphasis is on letter sound recognition and not on letter name-calling. I do not have anything with which to compare these statistics. I did not keep a record of letter sounds known for my previous two years on Career Ladder.

Bar graph #2 shows the average percentage of letter names known for the two classes for this year compared to the previous two years. I did keep records of these percentages for my Career Ladder project. The ending percentage of 93% was highest for this year with the use of *Zoo-phonics*. The previous two years were 88% and 90% which are really quite close to this year's 93%. The percentages started out higher for the 1998-1999 school year. They were lowest for the 1999-2000 school year. The class I chose to analyze for the first year had three students with the LEP tag (Limited English Proficiency). The class I analyzed for the second year had one LEP student, two LD (Learning Disabilities) students, and four receiving speech services. This may be one factor which led to the lower percentages. This year, I only had three students between the two classes who were receiving speech therapy. No students had been labeled with any other tag.

Bar graph #3 details the percentage change in letter names known between the quarters for this year as compared to the other two years. The total change of 44% for this year was almost identical to last year's change of 45%. The biggest gains are made between the 1st and 2nd and 2nd and 3rd quarters. The gains made between the 3rd and 4th quarters are significantly less. The learning curve seems to flatten somewhat in the spring.

There are two glaring situations I recognize right away in this data. The first is a lack of baseline data. During all three years of study, I have failed to collect a true baseline data set. The first data set is nine weeks into the school year when the children have already acquired quite a bit of knowledge in the classroom. The second situation is having no comparative data for bar graph #1. There was no data collected in previous years with which to compare this year's information. The only comparisons that could really be made were in graphs #2 and #3 with the letter names. It is impossible to make any other comparisons since Kindergarten is the first year of school for most of these children. This is a unique academic year in many ways, including a lack of prior assessment data.

By examining the spreadsheets and graphs, I can say my overall expectations were met. Graph #1 shows a class with a strong grasp of letter sound recognition. The students who were unable to achieve 100% are either 1) very close to 100%; 2) experiencing an unstable home environment; or 3) clearly ready to make steady gains over the summer or early in first grade. The percentage of letter names known was highest for this year, as I had expected, shown in Graph #2. I was a bit surprised at the low numbers shown for year #2. The reason for this, as I stated before, was probably the high number of special needs students. In Graph #3, I found it interesting that the biggest gain this year was between 1st and 2nd quarters. That 24% is over half the total percentage gain of 44% for the entire year. I am positive this was due to the infusion of *Zoo-phonics* into the program.

Spreadsheets and graphs only tell part of the story, however. The rest of the story is a clear

picture of true academic gains, a successful learning community, and a group of Kindergartners with a strong phonics foundation. The progress I saw in my classroom this year, with the use of *Zoo-phonics*, far exceeded my high expectations. First and foremost, my children were excited to learn about letter names and sounds. They all thoroughly enjoyed the characters, the alphabet games, and the fun songs. The program kept us all motivated and excited to learn more. I talked about phonics and reading strategies that I previously would have thought were only applicable in higher grade levels. Some of the surprising phonics components I introduced for the students to use in their reading and writing were the following: various ending “y” sounds, digraphs, blends, vowel partners, soft “c” and soft “g”, capitals, quotation marks and apostrophes. All these issues came up as a natural progression of their learning.

My original action research question was:

What new phonics-based instructional strategies can I implement to accelerate my Kindergartners' reading readiness?

Zoo-phonics has met this desire of mine without a doubt. One of my original concerns, stated in step one, was the difficulty of implementing guided reading groups. These did run much smoother than previous years which I attribute in part to the children's academic success with this program. The children felt confident in their knowledge and functioned much more independently in cooperative groups. In multiple ways, I am astonished at how well this method of teaching phonics worked in my room. In all my research which continued throughout the year, I never discovered any other program that was even close in quality to this program. It was designed by real teachers who continue to revise, update, and improve the program. The methods are sound. It is a program that can be easily integrated into an existing curriculum. Our Balanced Literacy Program at Westwind was only enhanced by *Zoo-phonics*. It helped boost student test scores in a positive, motivating, rewarding manner. The children have an emotional attachment to the animals, build on previous knowledge, and engage their whole bodies in learning.

Step 6: Reporting Results/Reflection Process

The results from implementing this project are multi-faceted. The students are at the heart of education, and I believe they benefited the most. They learned more, they learned better, and I believe they will retain the information longer. Their hunger for learning was apparent, and their motivation remained incredibly high. It was a significantly different learning environment this year. I experienced children taking a great deal more responsibility for their learning. They had a variety of learning tools from which to choose, and they knew how to use them. Each student felt gifted in his or her own individual way. Their unique learning and capabilities were validated and built upon in a way that I've never seen before. *Zoo-phonics* provided this base in a way that is real for children. Developmentally appropriate practices are interwoven throughout each lesson, objective, and goal.

Completing this study gave me a professional boost unlike any other in my teacher career. In the past eight years of teaching, I have completed my Master of Elementary Education, taken numerous Kindergarten seminars, and been to a variety of district in-services. None of these has stimulated my learning and my consistently deepening love of teaching like this project. Seeing the children's excitement for learning grow has been the best benefit for me. As a Level III Career Ladder participant, I have enjoyed seeing the children's independence bloom as never before. Their responsibility and self-esteem has blossomed. It has been a privilege to be the primary facilitator in this *Kindergarden* community!

There are even people outside of our classroom who have benefited from this project. I have had several parents comment on the children's success in reading and writing. My guided reading centers met two days per week, and I was fortunate enough to have several parent volunteers in my classroom on a consistent basis. They not only saw the incredible growth in their own child, but in the other classmates as well. I've had parents say or write:

- "Did you know my child is reading?"
- "We never did this in Kindergarten!"
- "I can't believe how much my child is learning!"
- "I must admit I was skeptical at first. I didn't think 2 1/2 hours a day was enough time for anyone to learn as much as he and the rest of the class did. But I was wrong. After observing how you taught your class 1 or 2 times I could see that the kids were not only learning, but they were having fun doing it."

My parents were very supportive of the learning environment. I attributed much of the success to *Zoo-phonics*, as this was the changed variable this year. I intend to involve my families more next year in the foundational philosophies and practices behind the program. Parent newsletters will involve more information about the program, and I may begin offering monthly parent workshops.

Nest year will present new opportunities for other changes as well. One major change will be the introduction of full-day Kindergarten to the district. I will be teaching this at Westwind. At the time of this writing, we already have the maximum amount of tuition-paying students for our school. I am thrilled that this dream has finally come to fruition. Through other research projects I have done and the experiences I have had, I firmly believe this is the best program for maximum academic success. This will equate to fewer subjects to track for data collection as well.

Other changes will involve the day-to-day implementation of the Language Arts curriculum. I will be dropping Jill Cauldron letter people program completely from my curriculum. This will give me more accurate data on the effectiveness of *Zoo-phonics* and provide increased

time to introduce more of their activities. I believe it will clear up some confusing elements of the reading program, such as having two characters for each alphabet letter. I will definitely collect baseline data next year during the first two weeks of school. Since next year will be my second year for tracking sounds, I will be able to do a comparative graph.

Increased training for the *Zoo-phonics* program is a very important professional goal for me. During the first half of this school year, I taught the program with borrowed materials and no official training. I wrote and applied for a Westside Impact Mini-Grant through the T.L.C. (Teaching, Learning and Collaboration) program in October. This is the first method in which I tried to secure the funding for training and materials. In mid-November, I was notified of my denial for grant money. Only 29 of the 84 grants that were submitted were funded this year. I then was reminded of the Career Ladder monies available for such professional growth conferences. My January training was funded in part by this and in part by money from Westwind. I attended a local two-day *Zoo-phonics* conference where I learned a great deal about the program and left with a heavy load of curriculum materials. The Phoenix representative, Dana Schuetze, who was the trainer for the class, was very interested in this research project. Shortly after the class, I was fortunate enough to meet with Charlene Wrighton, one of the creators of the program, on one of her trips here to the valley. There is also a professor at ASU West, Dr. Carol Beckett, who is interested in the statistics I have gathered this year. She is doing her own research project by compiling and analyzing results such as mine. I want to share my learning with other educators. I will be sharing my results with the above-mentioned people, Westwind principals, other Kindergarten teachers, and district-level administrators. My hope is that others will realize the value of this program and desire the expanded training for other teachers in our district. At the time of this writing, we are looking at various ways of funding training such as Title I monies or by hosting a *Zoo-phonics* training seminar. This last method would allow 25 of our teachers to attend at no cost.

A program that works as well as this one so obviously has should not be kept from other teachers and children who may benefit from it. My desire is that this Action Research project will indeed spark some interest and action within our Pendergast district. I look forward to continuing to use this incredibly successful program in my own classroom and facilitate its growth in our school as well as others.

Classroom Improvement Project

Action Research

2001 – 2002

Lori Vogt

Full Day Kindergarten
Westwind Elementary
Pendergast School District

Step One: Focusing the Inquiry

As I began teaching Kindergarten in the Pendergast School District nine years ago, I firmly believed in the value of providing a stable educational foundation for my students enriched with a variety of literary experiences. As I began participating in the Career Ladder Program three years ago, I further understood the vital nature of facilitating the growth of my students' language skills at this level. For the first two years as a Level III participant, I diligently assessed my classes' knowledge of letter names and sounds, using a variety of strategies and curriculum which was widely expanded from the time I began my career in this district. Last year, through this Action Research opportunity, I was able to introduce a new method of teaching phonics called *Zoophonics* and track the children's growth in this area. The comparisons to the previous years and from quarter to quarter were enlightening.

My research for this project will again be focused in the Arizona State Standard area of Language Arts, Standard 1: Reading. A strong foundation in language arts is crucial to success in the other curriculum strands. A solid understanding and appropriate use of our English language is essential for success in first grade and in later school years. Although my goal as a teacher is to prepare the students to be successful the next year, my desire is to maintain a high degree of developmental appropriateness in my Kindergarten classroom. I believe if children are hurried or taught first grade curriculum before they are ready, it can be harmful to their academic, social, emotional, and behavioral growth.

Assessment is a unique topic for Kindergarten teachers. Unless the student was in a developmental preschool or comes with an Individualized Education Plan (IEP), there is no previous academic data. We start from "ground zero." The report card has always been a tool we have used. In fact, for this school year, it has been revamped this year to align with our state standards and to provide uniformity among the nine schools in our district. There is a section at the top to track letter recognition and sounds. As mentioned above, this is the specific area I have detailed in the past. This year, I did collect a baseline data set the very first week of school. In previous years, my first set was collected for the first quarter report card.

Stanford Achievement Tests have never been a part of our Kindergarten world. However, in the spring of 2001, the reading portion was given to first graders for the first time in my career. The three subtests are: word reading, word study skills, and reading comprehension. After reviewing the results, I discovered that Arizona first graders ranked in the 60th percentile; Maricopa in the 63rd; Pendergast District, 46th; and Westwind, 44th. The word study skills cluster most closely aligns with my previous research and what I hope to accomplish this year. Students' ability to recognize the relationships between sounds and letters is assessed in the phonetic analysis section. Emphasis is on single consonants, short and long vowel sounds, consonant digraphs, and consonant clusters. The word study skills questions correlate most directly with Arizona State Standard Readiness level 4, performance objective 1, "*Identify consonant sound/symbol relationships in the context of words*", and Foundations level 1, performance objective 1, "*Decode words in context using beginning, middle, and final letter/sound relationships.*"

Step Two: Formulating the Question

In light of the introduction of the SAT for first graders, my goal as a Kindergarten teacher is to prepare my students in the best way possible to be successful in their first grade classrooms and to demonstrate their high level of reading readiness on the test. In previous years, my research focus has been on alphabet letter recognition and sound knowledge. I will continue to analyze that important strand while focusing more on blending those sounds together to read simple words, including, but limited to, our Kindergarten sight word list. Heavier emphasis will be placed on consonant digraphs and clusters if the children demonstrate readiness in these areas.

The situation clearly presents itself as to how I can incorporate this material and accelerate the reading readiness of my students to succeed in this arena with a high degree of motivation and a love for learning. Brain research has shown that most people are kinesthetic learners. If we move, we learn better. *Zoo-phonics* is a unique program which addresses this issue for young students, pulling in a variety of learning styles to accommodate our visual, auditory, and kinesthetic learners. It uses a system of actions linked to an animal for each letter which is a very successful mnemonic device the children can readily learn and use. It stimulates both sides of the brain, turning a traditionally abstract left-brain activity into a right-brain activity. The children learn more quickly, more efficiently, and more effectively.

Last year, the introduction of *Zoo-phonics* as a supplement to our adopted Balanced Literacy program was extremely successful. However, I began with borrowed materials and half information and did not receive any formal training until January. There is a plethora of materials and activities available through this program. The only materials I used were the blend cards which I showed the children on occasion. This year, I have expanded my collection of their materials immensely. To begin with, I am streamlining this portion of the language arts curriculum by only using the *Zoo-phonics* animals. Last year, I continued to use Jill Cauldron's letter characters as well, which provided some amount of confusion for the children. The animal/letter cards are clearly posted this year to provide a constant visual cue. Rubber stamps, drawing activities, and a variety of phonics games will be introduced which I believe will enhance the learning process. The songs off the "Come Meet Us At The Zoo" CD will be used as well to expedite alphabet name and sound acquisition. Much research has proven the effectiveness of using music for retaining information, and I will be exploring this area specifically in light of Howard Gardner's Intelligence studies.

My question is:

What multi-sensory strategies can be effectively utilized to improve my Kindergartner's phonics skills?

Step 3: Review of Literature

My Kindergarten classroom is a print-rich environment filled with many opportunities for building literary skills. The particular strand of interest within this research project is phonics. Since we are trying to boost our student achievement and thus improve our school's test scores, it makes sense to begin building a solid foundation of reading early in the Kindergarten curriculum. There are many studies comparing the effectiveness of a variety of phonics programs. These studies prove that programs including direct systematic instruction on letter-to-sound correspondences lead to higher achievement in both word recognition and spelling. This is particularly true in the primary grades and for economically at-risk students (Adams, 31).

Balanced literacy is an all-encompassing communication arts program we have adopted school-wide at Westwind. It has the basic building block components of read-alouds, shared reading, guided reading, and independent reading. All of these four blocks are structured into the writing program as well. In light of this enriching program, it is important that we do not tolerate the "old phonics" of worksheets and mindless drills. It is crucial that any phonics program must reflect what we know about how the brain works and how reading is learned. We must insist that authentic reading and writing remain the core of literary instruction in every classroom (Cunningham, 192).

The amount of information on current brain research is overwhelming. One thing that neurological researchers have recently discovered is that there are no pictures stored in the brain. Instead, there are patterns of connections that make up a memory when triggered. The more connections that exist in a brain, the smarter that person will be. Life learning experiences have a great impact on the kind and number of connections that are made (Kotulak, 20). In her Newsweek article, "Your Child's Brain", Sharon Begley highlights the scientific research of Dr. Patricia Kuhl that babies complete their auditory perceptual maps by the time they are one year old. Early interactions which are positive and supportive with children are crucial to their academic success. A lack of stimulation or presence of negative influences can be extremely detrimental.

To take a step further on this path of brain research, we soon come to the issue of left and right hemispheres. Understanding more about this phenomenon has significant impacts on teaching styles. Traditional education has focused primarily on left-brain activities which tend to be filled with abstractions and symbols, some of which are not developmentally appropriate for our younger students. As teachers, we can provide toys and experiences that develop both sides of the brain (Healy, 134). Teaching the alphabet as we have in the past is a prime example of a left-brain activity. However, through the unique movement and interaction involved in *Zoo-phonics*, it becomes a right-brain activity. The sequential process of moving toward abstract symbols is developmentally appropriate and more in line with current brain research. Research suggests that children need right-brain interaction consistently up through third grade (Fleming and Stern, 1986).

The brain has a magnificent capacity to store information. Although memory loss is often a focus in mid-life or for the elderly, it is also an issue in our elementary schools. If we can help our students improve their memory regarding letter and sound recognition, the results could be significant. The encoding process that is used by the children's brains has a great impact on long-term learning. There is a factor called "phonological awareness" which involves breaking language down into its smaller components. "Cracking the code" has been a term associated with breaking down a written word into individual letters (Baddeley, 232). We know that visual mnemonics is one such way to effectively accomplish this task. Test

results have shown that when children are shown a picture matching the configuration of a letter, alphabet mastery is high (Ehri, Deffner, and Wilce, 880-893). To avoid long-term dependence on the pictorial, *Zoo-phonics* utilizes a three-step process which culminates in the letter alone without the animal clue.

Music is also a powerful tool in helping human memory. In Frames of Mind: The Theory of Multiple Intelligences, Howard Gardner states, "Of all the gifts with which individuals may be endowed, none emerges earlier than musical talent." He also goes on to explain how important it is to note the relationship between music and the other realms of intellect (122). There have also been direct links shown between exposure to classical music and mathematical reasoning. In line with the above-mentioned brain research, German researchers discovered that neurological circuits are literally rewired when one is exposed to music (Begley, 57). When these circuits are formed early in life, they seem to last. Children are interested in and motivated by music. It is a part of their everyday world. Patricia Cunningham exhorts teachers:

"One of the best indicators of how well children will learn to read is their ability to recite nursery rhymes when they walk into kindergarten! Since this is such a reliable indicator, and since rhymes are so naturally appealing to children at this age, kindergarten classrooms should be filled with rhymes. Children should learn to recite these rhymes, should sing these rhymes, should clap to the rhymes, act out the rhymes, and pantomime the rhymes. In some kindergarten classrooms, they develop "raps" for the rhymes. (p. 39)

Zoo-phonics does indeed have a variety of motivating songs on their CD which happens to include a song called "The Jump Rope Rap." The children respond very enthusiastically to this song as well as all the others exciting musical selections in this collection. They often utilize the wall-mounted animal/letters to remind them of the signals as the songs play.

Visual and auditory learning is quite clearly addressed through the pictorial mnemonics, the songs, and the chants. Kinesthetic learning is the third important area which makes *Zoo-phonics* an incredibly appropriate, wonderfully motivating, and a highly unique process of learning to read and write. Retention rates are phenomenally higher when human beings are moving their bodies, regardless of the subject matter. Through this program, children are given numerous opportunities to manipulate and dramatize the letter sounds of the alphabet. The body signal is a tool for encoding and decoding. Research has shown that paired associate learning is much improved when children are given a concrete and interactive way of linking the stimulus and response terms in memory (Ehri, Deffner, and Wilce, 881). As soon as the children signal, their memory is triggered to connect the movement to the sound and letter name. Encouraging the movements also take advantage of children's inborn need to wiggle, squirm, and move about. These academically oriented movements help the class focus during times of decreased activity like writing in which stillness and increased attention is valuable.

Multi-modal approaches to learning are key. Reaching our students where they are at and bringing them as far as they can go should be the goal of educators. Classrooms must provide numerous opportunities for our auditory, visual, and kinesthetic learners. As teachers, we must remain abreast of the current educational practices. Through his initial studies of multiple intelligences, Howard Gardner highlighted the following: linguistic, musical, logical-mathematical, spatial, bodily kinesthetic, and personal. Since then, he has fine-tuned and

expanded these areas. A better understanding of these studies can only expand our understanding of the human intelligence, making us better teachers for the students we serve. Current research should be improving the way we teach. If we do not allow this to happen, our classrooms will become stagnant, dull, and dry. Our children will lose out on windows of opportunity that may quite literally be closed forever.

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Step 4: Developing an Action Plan

Last year, some very basic steps of *Zoo-phonics* were introduced. The large picture cards were utilized on occasion. The letter sounds, names, and signals were taught. However, I was lacking a great deal of information about the program. This year, I have had the opportunity to expand the use of this process in my curriculum. Not only do I have more materials, I also have more training. Another significant change that has occurred is the full day Kindergarten that I am now teaching. This has allowed for a great deal more time for an enriched academic environment. Every morning from 8:30-11:30, we mainly focus on our Language Arts curriculum. The afternoons are a time to focus on other subject areas such as Social Studies, Science, and Math. However, since thematic teaching is key, there is a great deal of overlapping that occurs naturally.

The philosophy of the creators of *Zoo-phonics* fits hand in hand with my own. We agree that all children develop at a unique pace. Each child should be allowed as much freedom as possible within the classroom to develop their skills in academics, behavior, social, physical, and emotional growth. Developmental appropriateness is crucial. No child should feel hurried, rushed, or pressured. *Zoo-phonics* teaches that children develop the language process through the “Hierarchy of Learning” which consists of:

1. Listening
2. Speaking
3. Reading
4. Writing

This step-by-step process is mirrored in the “essences” or foundations of *Zoo-phonics* as well:

1. Lowercase letters of the alphabet are taught before the uppercase letters.
2. *Zoo-phonics* uses animal pictures in the shapes of the lowercase letters as a mnemonic to teach the shapes of the alphabet.
3. *Zoo-phonics* teaches letter sounds before letter names. The animal name establishes each letter sound. (Example: allie alligator, bubba bear, etc.)
4. *Zoo-phonics* uses body signals for a connection and association of the animals to the shapes and sounds of the letters.
5. *Zoo-phonics* treats the alphabet as a whole entity.
6. Short vowels are taught before long vowels.
7. The abstract becomes concrete through music, stories, puppets and games.

These are just the basics of the program. Not only is there a detailed Language Arts Resource Manual, there is an in-depth Kindergarten manual that specifically outlines fifteen units in detail. For this year, I have chosen to spend approximately two weeks on each unit. The focus of each unit is as follows:

- Unit 1: Introduce the animal characters and “Come Meet Us At the Zoo”
- Unit 2: Learn more about the animals, “Come Meet Us At the Zoo”, and introduce “Left to Right, Up and Down”
- Unit 3: Introduce “One Sound, One Signal”, “Jump Rope Rap” and parts of a book
- Unit 4: Introduce merged animal/letters, initial and ending sounds and signals of vc

and cvc words, large motor experiences, and vowels, “The Hardest Workers”
Unit 5: Continue merged animal/letters, vowels, introduce the “Make It Say” game (pre-sound blending), emphasize middle sound of cvc words
Unit 6: Continue merged animal/letters with “Make It Say” game, recognize vowel sounds in cvc words, introduce “Let’s Make a Wave”, handwriting and spelling
Unit 7: Continue merged animal/letters, “Make It Say”, “Let’s Make a Wave”
Unit 8: Continue “Make It Say”, introduce lowercase letters, handwriting through geometric shapes, sequencing
Unit 9: Continue lowercase letters with “Make It Say”, beginning, middle, and end, introduce “Step It Out” into handwriting
Unit 10: Continue “Make It Say” with lowercase letters, “Step It Out”, first spelling list, and blends
Unit 11: “Make It Say”, sound blending, “Step It Out”
Unit 12: “Make It Say”, review story charts, “Hardest Workers”, problem solving
Unit 13: Introduce the merged capital letters and letter names
Unit 14: Continue merged capitals and letter names, auditory presentation of syllables, map of the world; learn from memory “Bed in Summer”
Unit 15: Safari Week – putting it all together

There are so many activities to help the children learn the letters and sounds. They are all incredibly motivating. We play at least one song from the CD daily. This helps tap into their musical intelligence as well as their natural talent to sing. The children are moving a great deal of the time during the activities, especially during signaling. This helps make connections between their left and right hemispheres in their brains.

Kindergartners are kinesthetic learners at heart. They like to wiggle and move and squirm! *Zoo-phonics* takes full advantage of this fact. There is a great deal of auditory and oral stimulation throughout the activities as well. It is a very healthy balance of all three. This multi-modal approach works for young children.

When children are having fun, they stay on task longer. The multitude of games that exist in this program is phenomenal. The game format takes advantage of the young students’ playful attitude, turning every opportunity into a learning experience. Some of the games are: Zoo-fish, Zoo concentration, Zoophonia Says, Zoo Bingo, Zoo grid match, Gordo Gorilla’s Banana Party, and Mix and Match. There are also rubber stamps, magnet letters, and desk alphabet strips. Finger puppets and larger puppet designs are included for each animal. There is a “How to Draw” book which segments the animals and makes the children more comfortable with their own art work. The nature wall cards help teach the scientific facts about each animal. There is even one activity where the animals can be divided into nocturnal and diurnal groups. Every subject area is addressed in *Zoo-phonics*: Language Arts, Math, Science, Social Studies, Music, Physical Education, Technology, Visual Arts, and Dance.

Somehow, the thoroughness of the *Zoo-phonics* program does not take away from our existing district curriculum. It supports every area and enhances it quite nicely. The variety of activities available has become an excellent avenue for academic enrichment in the full day Kindergarten program. Not only has it become key during our Language Arts time in the morning, it has also found its way into our Balanced Literacy center time. I plan to continue down the path I have outlined above. The evidence of its success has already shown up in first quarter report cards. The growth the class has enjoyed from the first week of school when a baseline data collection was taken is substantial. I do believe that the multi-sensory strategies used in the *Zoo-phonics* program are improving my Kindergartners’ phonics skills. Their word study skills and decoding abilities are improving dramatically already.

Step 5: Collecting Relevant Data

Fall Analysis

So far this school year, I have collected three relevant data sets. Data set collection times align with report card periods. The end of the second quarter falls on December 21st, the last Friday before Christmas vacation. Although the children have not been assessed on all report card items, they have all been tested on letter name recognition and sounds for this second quarter. The third data set is the baseline which was taken the very first week of school in August. The lack of this data set in previous years was determined to be a major flaw in the research. Correction of this problem this year has already proven interesting.

Although the school year is only half over, I strongly believe that my action research question was a legitimate one. I have gathered my data in the form of three graphs: #1: % of letter sounds known; #2: % of letter names known; and #3% change of letter names known. The difference between this year and last on graph #1 is drastic. The current average percentage is the same as the *end* of last school year for letter sounds. The same difference is obvious with letter name recognition in graph #2. Comparisons amongst the years at the same time (second quarter) are interesting also. This year's class knows 90% of their letter names as compared to 74, 54, and 73 in the previous three years. Since I have only tracked letter sounds for one other year, I can only observe a difference of 90% as opposed to 76% at the same time last year. A fifty percent increase of letter sounds known in the 1st quarter is quite substantial as well.

There are two questions I will try to answer in the spring. First of all, I am beginning to question the relevance of graph #3. I cannot identify a pattern, nor do I believe the changes between quarters are that insightful. The second more important issue is that of my new full day schedule in Kindergarten. The time spent on Language Arts curriculum is far greater than any of the other years. Although I am still convinced of the great value of *Zoo-phonics*, I will strive to determine the other possible causes behind this group's success.

The change in my teaching practice is a good one. It is beneficial for the children. The class is enjoying learning their letters and sounds. They are motivated by the multi-sensory activities that are presented to them for exploration on a daily basis. I will continue to pursue this avenue of Language Arts instruction throughout the remainder of this school year. I anxiously await being able to analyze the data from the entire year.

Spring Analysis

Dividing the school year into two specific halves is more beneficial in light of the timing of my data set collections. I find it quite interesting to reflect back on my fall analysis. It is necessary to include it clear through until the conclusion of my research project. It shows the change in my thinking and plan of action spurred by the overwhelming proof of the students' academic success.

The fourth data set was collected in late February to prepare for distribution of third quarter report cards at parent/teacher conferences in early March. The numbers are thrilling! Every single one of my children (except for one) knows every letter sound and name. The trend has been steady growth throughout the year, with the percentages consistently higher than the previous three years of data.

I had doubted the relevance of graph #3 in my fall analysis. I am choosing to keep it for a couple reasons. It does show a leveling off of percentage improvement. As the percentages of sounds and letters known increases, there is less statistical room for improvement. In years one through three of the project, the leveling off occurred between the third and fourth quarters. This year, it quite clearly occurred earlier, between the second and third quarter. Another reason for keeping this graph is to compare the total change at the end of the year to the previous years. I believe this will be of interest as well.

There are some other factors that have affected my data sets. One of these is something I have mentioned before: the sheer time on task available through this new full day Kindergarten program. I maintain that *Zoo-phonics* is extremely effective, but also realize that more time to do more activities and become more proficient is a very relevant factor. Every Kindergarten teacher in the district will be submitting statistics very similar to the ones I have collected for this project. An analysis will be done comparing full day Kindergarten to the regular half-day programs.

Student #21 is my anomaly in my data sets. I was waiting to see what the spring assessment brought, but the child is clearly functioning at a much lower level than the rest of his peers. I have spoken to his mother, encouraging her to enroll him in summer classes and monitor him closely. I will include more of an analysis of him at my conclusion. Regardless of this student, the rest of the class poses an interesting concern as well.

With the extreme success of the children in learning their letter sounds and names, it has become somewhat of a moot point to continue collecting this data. There is nowhere to go after the 100% mark is achieved! Another measure of success must be introduced at this point in the project. The number of sight words known is an obvious possibility. There are 25 Kindergarten sight words in our district curriculum which we have been working on this year. I already have six students who have mastered the list and have moved on to the first grade sight words. This is one data set that we will be submitting for the end-of-the-year Kindergarten statistical analysis.

There is one other change which has occurred that will not specifically affect my data sets but will affect my overall project analysis. As I had mentioned back in step one: *focusing the inquiry*, first graders had been given a portion of the SAT. I have recently come to understand that this will not be happening this year. My plan had been to include some preparation work for this test in Kindergarten, but I may rethink this in light of this recent change. I have secured a primary Test Best booklet to incorporate some of the SAT questions into the daily curriculum. I am still undecided at this point as to what to do with this new information.

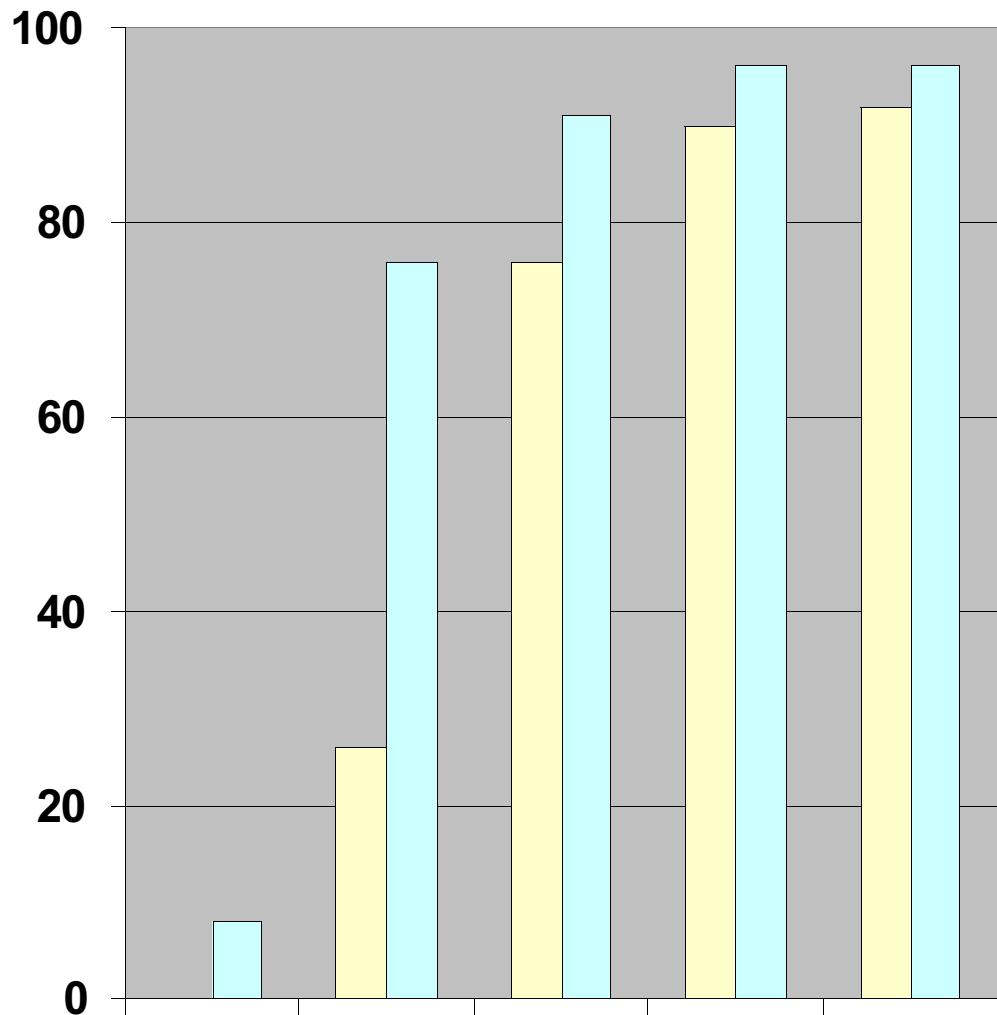
One thing I am positive about is that I will continue to use all the elements of *Zoo-phonics* up until the very last day of school. Due to this classes' high academic success, I find

it necessary to tweak many of the activities to their level. Instead of signaling to read words, the children can just sound them out. Instead of individual letters, we talk much more about blends. Instead of staying with single vowel words, we have moved on to talk about “polite partners”, which are two vowels together making a new sound. Instead of merely talking about periods and commas, this class has an acute awareness of a multitude of other types of punctuation. It is amazing what the children can accomplish with a steady foundation of letter sounds and names. *Zoo-phonics* has been an integral part of building this foundation and moving the class to higher-level activities.

#1

% of Letter Sounds Known

2000-2001 2001-2002

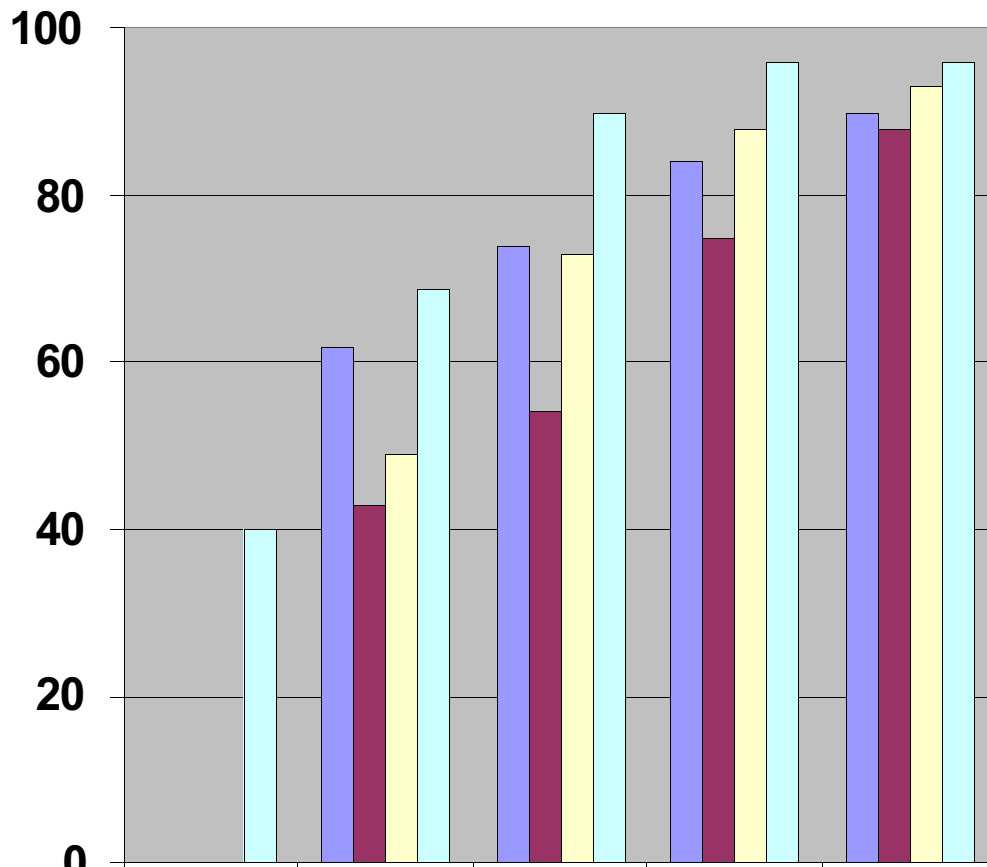


	base	1st qtr	2nd qtr	3rd qtr	4th qtr
2000-2001		26	76	90	92
2001-2002	8	76	91	96	96

#2

% of Letter Names Known

1998-1999 1999-2000 2000-2001 2001-2002

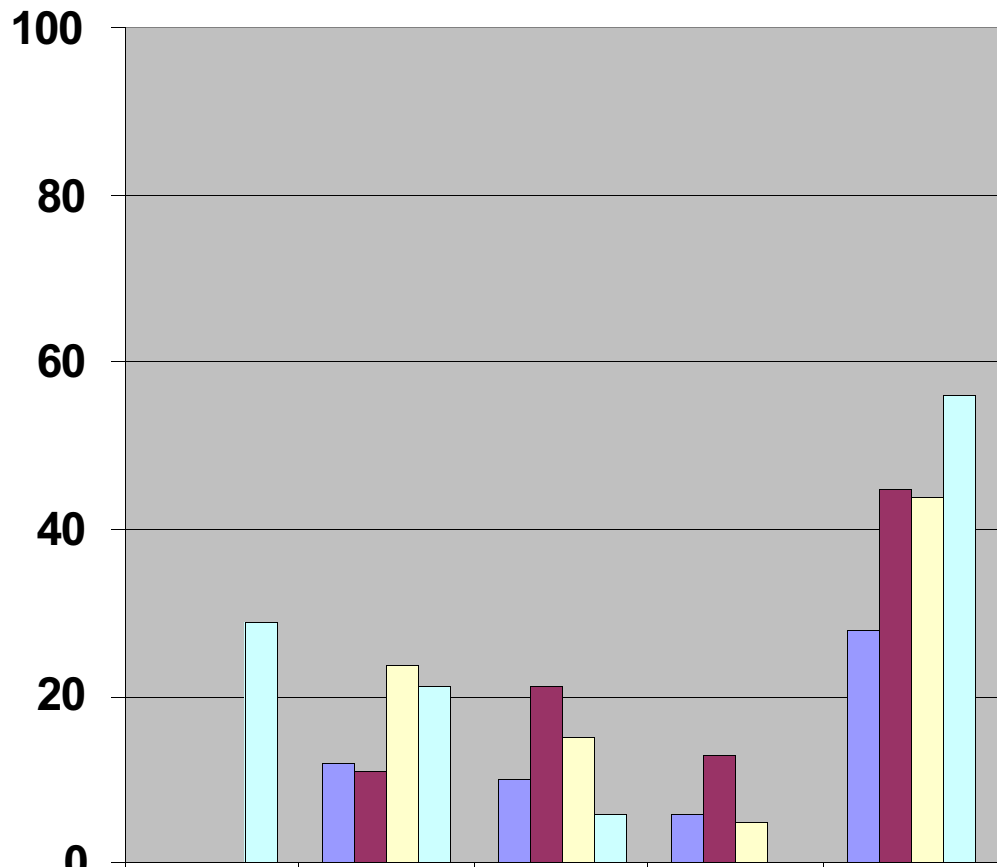


	base	1st qtr	2nd qtr	3rd qtr	4th qtr
1998-1999		62	74	84	90
1999-2000		43	54	75	88
2000-2001		49	73	88	93
2001-2002	40	69	90	96	96

#3

% CHANGE of Letter Names Known

■ 1998-1999
 ■ 1999-2000
 ■ 2000-2001
 ■ 2001-2002



	base-1st	1st-2nd	2nd-3rd	3rd-4th	total
■ 1998-1999		12	10	6	28
■ 1999-2000		11	21	13	45
■ 2000-2001		24	15	5	44
■ 2001-2002	29	21	6	0	56

Step 6: Global Analysis

To effectively address my global analysis, I must first revisit my original question of:

What multi-sensory strategies can be effectively utilized to improve my Kindergartners' phonics skills?

In review, the visual strategies were seeing the letters in various stages, the blend cards, word families, stamps, letters strips, magnets, mini books, and the multitude of phonics games. The auditory components were hearing me, the signal video, each other, and the songs on CD. The children were engaged kinesthetically by signaling the sounds by themselves, dramatizing the songs, and playing phonics games outside. All three of these main modes of learning were integrated daily. They were taught consistently.

Through the use of the above strategies, the children's phonics skills did improve without a doubt. There are a variety of places in which this is clearly evident. In graph #1, the numbers are higher across the board when compared to last year. This graph shows the percentage of letter sounds known. The same holds true in graph #2 which tracks the percentage of letter names known. Although I was undecided earlier in the year as to whether I would keep graph #2, I am glad that I did. It details the percentage of change of letter names known between data sets. The overall change is higher (56%) than the previous three years. The changes each quarter differ quite a bit, but these numbers themselves are not quite as significant as the total change. The differences may be due to the learning curves between each of the classes.

One additional data set that has not been analyzed previously is the percentage of sight words known. As I stated in the fall analysis, when the children achieved the 100% mark in either the letter names or sounds, there is no room for growth in this area. Therefore, I introduced the percentage of sight words known as another indicator of progress in the spring. I used the 25 Kindergarten words from our district Communication Arts curriculum. Baseline data was collected in January. It showed that the class knew 37% of their sight words on average. Only three students could read 100% of the words. By 4th quarter in May, the class knew 71% of this list on average. Eleven of the students knew every single word! This 34% overall change is significant. It shows that the children are taking their knowledge of the letter names and sounds and applying it to their reading.

There are other indicators which could have been used to demonstrate student achievement as well. Guided reading groups began in January with the children being grouped in like ability levels. They were extremely successful, and the class progressed a great deal through the levels. Each child took home individual reading books to read with their parents. These are leveled as well, and all of the children progressed to at least the next stage. Every time a student brought a book back that had been practiced, I listened to them read one on one at my desk. This allowed a personalized mini lesson for each child, tailored to their own special needs and skill level. While these conferences occurred, the rest of the class did silent sustained reading on their own. This time during each day was an excellent opportunity for children to choose their own books that interested them at their ability level.

One other probe that could have been used were PDRA's (Pendergast District Reading Assessment). This is an instrument that is supposed to indicate whether a child is below, at, or above grade level. I did test my students using this, but I find it to be a tool that is still in somewhat of a transition. I do not feel that it is very indicative of Kindergartners' skill level or

progress in reading. Each child's PDRA score was submitted, however, to the Community Education Department. As I mentioned before, I understood that this department would be collecting data to compare full day and half day Kindergarten. There was some lack of communication, and this data collection did not occur unfortunately. This is something that I believe would have been of great interest to a number of concerned groups in our school district.

The full day schedule is definitely something that affected my children's success immensely. I knew it would be a positive change, but I was completely naïve about how great that change would turn out to be. I taught a half day schedule for eight years. This consisted of teaching a morning class for two and a half hours and an afternoon class for two and a half hours. I always felt rushed and out of time from the minute the students stepped in the door. I know children need time to process and work at their own pace, but I was unable to allow this. Lessons were truncated and instructions abbreviated. Children were not given their full opportunity to develop. Going to full day has allowed the Kindergartners the time they need for everything. Not only have they grown more academically, but socially, emotionally, behaviorally, and physically as well. We have had time for whole mornings of Language Arts that included reading, writing, and spelling in a variety of settings through exciting activities. We had time to visit and really get to know each other. I could listen to each important story the children had to tell me. I had time to thoroughly teach all of the Kindergarten curriculum in Language Arts, Science, Math, and Social Studies. I was better able to cover the Arizona State Standards and prepare my children for first grade. So, although I strongly believe in *Zoo-Phonics*, I know that the full day program lent to the success in my classroom this year. Unfortunately, there is no possible way to statistically separate the two.

Analyzing the data that I have collected has been quite interesting as well as time-consuming over the past four years. Although I do have a bachelor's degree in business, I have at times felt inadequate as an amateur statistician. One of these times in particular was at a statewide Career Ladder meeting I was fortunate enough to attend in March at the Mesa School District. The keynote speaker was Ed Sloat from the Peoria Unified School District who is an expert in the field of educational statistics. Some of the things he spoke about that day were applicable to my project. He said that it is harder to raise the percentage (on any kind of testing) the further you are away from 50. I know this has a great deal to do with the leveling off effect I saw on my graphs. I was able to contact him after the meeting to ask him to verify that I had done all my percentages correctly, which he did.

Another expert who is also collecting data is Dr. Carol Beckett from ASU West. Since we began teaching with *Zoo-Phonics*, there has always been concern over the lack of research. I found out the hard way when I began doing the research for this project. The closest thing to hard data that we have is teachers attesting to the fact that their students are succeeding like never before. Dr. Beckett is collecting, compiling, and analyzing data like mine from a whole group of teachers so that some kind of hard research will now be available.

The results are exactly what I expected. I am very pleased that the more *Zoo-Phonics* is used, the more success the children experience. The trends in the data reflect just that, time after time. I never found any conflicting data or resources in all of my research. Everything I found supports utilizing multi-sensory strategies to enhance learning. This program is the only one of its kind that ties in the crucial kinesthetic element that children of this age so desperately need. If there is another like program that exists, I have yet to come across it.

I am unsure how the aspect of bias would be introduced into a project like this. I collected the data, which were mere numbers. I suppose one could skew the data to reflect

more growth than what happened. I did not, of course, and know that the percentages would be exactly the same if the assessments could be replicated under the facilitation of another teacher. My anecdotal records on each child document their individual successes. I guess the only bias I personally have is for *Zoo-Phonics*. Since I know how well it works for children, I would be very unwilling to discontinue its use. It fits in very nicely as a phonics-learning strategy in our district Language Arts curriculum.

My findings mean that I will continue to use this program in its entirety. I will continue to spread the word about its success and participate in any research projects involving data collection. Our school is considering training our other Kindergarten teachers in *Zoo-Phonics* this summer. I will submit a copy of this research to validate its success to those funding the training. I have shared some of my materials with my colleagues, but they have not been to an official training. It helps so very much to attend one of these like I did last year. I continue to stay in touch with the local representative as well as the creators of the program in California. It is spreading like wild around our country, and I love being able to see this growth. My hope is that all children in early education would have the opportunity to learn phonics in this fun, developmentally appropriate way.

Step 7: Personal Reflection

As I pause before writing this last piece, I suddenly realize how bittersweet this ending is for me. Studying *Zoo-Phonics* through Action Research has been an integral part of my personal and professional life. Although I will continue to use it in my classroom, I have come to a point that analyzing it as I have been will end. I have found this study to be such an enriching experience. Knowing that something is working well in your classroom is a blessing in and of itself. Seeing the results in black and white, with percentages and graphs and data sets takes the excitement to quite another level.

Participating in this Action Research project has allowed me the opportunity to really get into something I truly believe in. Although I was in no way burnt out last year, I felt a complete sense of renewal just from engaging in this write up. It has showed me that high expectations yield incredible academic results. It has validated what I already knew in my heart about what is the best kind of learning environment for children. The kids get up and move with this program. I knew that was best. The kids have fun with this program. I knew that was crucial. The kids connect with the animals. I knew that was motivating. I could go on for much longer. The bottom line is that this program works for young children. It worked for me as a Kindergarten teacher.

When something is as successful as this, I feel like sharing it. I feel sorry for the teachers who do not use it. I feel crushed that all students do not have it in their classrooms. My mission is to spread the word in whatever way I can that *Zoo-Phonics* works, and it works well. As I said before, I will continue to participate in the ASU research. I will keep in touch with the creators. I may even be able to help out the local representative in some way with her training sessions and conferences. When something is this good, it should not be kept a secret. It should be shared with others. I hope that sharing my findings will help at least one teacher who is interesting in improving the learning for her students.

I cannot think of one thing I will do differently due to the findings from this project. My teaching of Language Arts next year will be very similar to how it looked this year. Even the timing of teaching each unit for two weeks worked this year. There may be some things I will need to adjust for the new group in the fall, but the basic structure will remain the same. I think change is great if the goal is improvement. However, I strongly disagree with change just for the sake of change. I see this happening too often in education at the expense of consistency and a strong foundation for our children. Next year I will find another area in my curriculum that can use some improvement. I look forward to participating in Career Ladder again and researching some completely different area. I am very grateful for an instrument that allows me to do this.