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ABSTRACT

A study determined if cross-age pairing of first-grade and sixth-grade students would have an effect on writing achievement. For 6 weeks, one group of beginning first-grade writers was paired with more able sixth-grade developing writers, while another group of beginning first-grade writers and sixth-grade developing writers was not cross-age paired. The four groups (all students in the Union County, New Jersey, school district) were given a writing sample and a writing survey before and after the project period. A picture response writing sample and an opinion writing survey of how students perceive themselves as writers and how they think others perceive them as writers were identical for each sixth-grade and each first-grade group. The average gain in holistic scoring results of the paired sixth-grade group was significant when compared with those of the non-paired sixth-grade writers. Ideas and content, word choice, and total words written increased more in the paired group than they did in the non-paired group. In addition, many useful writing skills were shared between paired writers and a friendship developed between many partners. The tutors needed to increase their skills to provide the support necessary to help the grade 1 students. Paired students asked questions, discussed the writing process and sentence structure, and organized their thoughts together. (Attached are 6 appendixes of research materials; contains 39 references.) (Author/TB)

The Effect of Cross-Age Peer Grouping on the Writing Achievement of Sixth and First Grade Students

By Gail M. Toth

In partial fulfillment of the requirements for the degree of
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Abstract

The purpose of this study was to determine if cross age pairing of first grade and sixth grade students would have an effect on writing achievement. For six weeks, one group of beginning first grade writers was paired with more able sixth grade developing writers, while another group of beginning first grade writers and sixth grade developing writers was not cross-age paired.

The four groups were given a writing sample and a writing survey before and after the project period. A picture response writing sample and an opinion writing survey of how students perceive themselves as writers and how they think others perceive them as writers were identical for each sixth grade and each first grade group. The average gain in holistic scoring results of the paired sixth grade writers was significant when compared with those of the non paired sixth grade writers.

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Some adults remember the teacher or adult that most influenced them to read, play an instrument, or perform in sports. More than likely they might recall a significant adult who influenced their future careers or successes. But most adults will not recall the person that influenced their present writing success. The problem appears to lie within our writing experiences and perhaps the lack of writing experiences. Many writing acts that accompany reading instruction are composition activities Pearson, 1985]. Many times writing assignments given by teachers to their students encompass assigned written reports to answer particular questions or to complete an assigned topic within the text. These assignments are teacher directed and fit into the curriculum. Writing assignments are part of the creative reading instruction that include outlines, series of summaries, story mapping, story grammars, and pre-reading writing activities all supporting reading achievement. There is a connection between reading and writing.

Reading and writing are closely related and research indicates that the number of books read inside the school [Denham & Lieberman, 1980; Rosenshine & Stevens, 1984] and out [Anderson, Wilson, & Fielding, 1988] is a reliable predictor of reading achievement. Students who choose not to read are at risk in terms of past, present, and future learning [Leland, Fitzpatrick, 1994]. Research by Froese [1990] indicates that reading and writing are related and mutually reinforcing.

Vygotsky describes the readiness of a student as the "Zone of Proximal Development" [Vygotsky, 1978; Campione, Brown, Ferrara, & Bryant, 1984]. This zone is the distance between a child's independent performance and the performance when supported and guided by someone with more experience and expertise [Lipson,Wixson, 1991]. Vygotsky believes that successful learning is achieved with the support of scaffolding of students and with collaborative efforts of adults.

Cross age tutoring, especially in literacy activities, is becoming popular [Cohen, Kulik & Kulik, 1982; Labbo & Teale, 1990] because it can benefit students of many ages and abilities. Older children can model reading for younger children and increase the younger students' listening skills, story knowledge, vocabulary development and language development [Cohen, 1968].

Trained older students scaffold reading skills in cross age peer tutoring for younger student, and progress is made in the four types of literacy activities: tutorial activities, subject matter acquisition activities, reading and creative dramatics activities, and writing and book making activities in a program initiated by Porter Elementary School in Messquite ISD with fourth and first graders [DeRita, Weaver,1991].

It is important for educators to understand the importance of writing success in young students and achievement in writing with the support of cross age peer tutors. The more scaffolding a student receives, the greater

the chance for success to occur. Because many factors influence a child's writing achievement, more research has to be done to determine if a program designed using cross age peer tutors is in the best interest of the student's writing success.

Hypothesis

To provide further evidence on the topic a six-week study was conducted among first and sixth grade students engaged in separate writing programs, one using cross-age pairing and the other a traditional classroom approach. It was hypothesized that there would be no significant difference in writing achievement and enthusiasm in students supported in the writing process by cross age peer tutoring and those student in a traditional classroom without cross age peer tutoring in writing.

Procedures

The population in this study consists of students in two first grade and two sixth grade self-contained classrooms within a kindergarten through sixth grade elementary school in a middle to upper-middle suburban Union County school district. Students were of similar socio-economic status since the participants consisted of students from one locality.

Two first grade classes were selected randomly. The grade one control group consisted of 16 students and the grade one experimental group consisted of 17 students.

Two sixth grade classes were also selected randomly. The grade six control group consisted of 20 students and the grade six experimental group consisted of 19 students.

The first grade control and experimental groups were initially given a student writing questionnaire consisting of eight questions. The questions addressed information on the following: first, how they viewed themselves as writers; and second; how they believed others viewed them as writers in the school and at home.

Both control and experimental first grade classes were given writing folders with the same prepared insert papers. The folder consisted of the following: 1. Writing process steps; 2. Work sheet story starters; 3. New vocabulary word list sheet; 4. Three story topic writing assignments; 5. Friendly letter writing procedures; 6. Grammar uses and sentence structure. Control first grade students and experimental first grade students were given folders and the papers inside were reviewed and discussed. The control group completed the folder stories independently with their classroom teacher. The experimental first grade class completed the writing folder stories with the help of their randomly assigned cross age peer tutors in the experimental sixth grade class.

The sixth grade control and experimental groups were each given a student writing questionnaire consisting of eight questions. The questions addressed information on the following: first, how they viewed themselves as writers; and second; how they believed others viewed them as writers in school and at home.

The control and experimental sixth grade classes were given writing folders with the same prepared insert papers. The folder consisted of the following: 1. Writing process steps; 2. Worksheet story starters; 3. New vocabulary word list sheet; 4. Three story topics to be completed during the six week period. The control and experimental groups were given folders and the papers inside were reviewed and discussed. All students were to complete the three written assignments within the six week period and complete folder work independently. All student folders were used as part of the student's grade assessment by the classroom teacher.

Sixth grade experimental students were trained in three areas: first, the writing process; second, grammar and usage instruction; and third, encouraging their younger peer partners to brainstorm writing ideas, create stories, use new and interesting words, and self correct their own writing. Grade six experimental students were instructed to recognize writing expectations of a typical first grade student through writing samples.

Each grade six experimental student was randomly assigned a grade one tutee. Letters of introduction were written by peer partners and exchanged. Both tutors and tutees mailed their letters in an inter-school tutor mailbox designed for this study. Letter writing between tutor and tutee throughout the six week study was encouraged.

The two first grade classes were assigned an initial holistic student writing sample. A painting by Diego Rivera entitled *Piñata* was displayed

and discussed in class. Students were to write about the story the picture told.

The sixth grade control and experimental classes were also assigned an initial holistic writing sample. A painting by Vincent Van Gogh entitled *First Steps, after Millet* was displayed and discussed in class. Students were to write about the story the picture told.

At the conclusion of the six week peer group writing study, all four classes were given the student writing survey they previously took and asked to provide a holistic writing sample in which they would respond to. The writing sample picture for first grade students was by Grandma Moses entitled *Sugaring Off*. The writing sample picture for the sixth grade classes was by Frederick George Cotman entitled *One of the Family*. All writing samples required students to write about what the picture story told.

A comparison of results between initial writing survey and holistic writing samples taken and the final results after a six week peer writing program is to be reviewed.

Results

Table I illustrates the findings in respect to the writing achievement using holistic scoring of both grade six students that were cross-age paired in the writing and grade six students that were not cross-age paired in the writing.

As can be seen in Table I, there was a difference of 1.35 between the

Table I

Mean, Standard Deviation, and *t* score of Writing Achievement

Sample	Mean	Standard Deviation	t Test
Experimental	2.3	1.3	3.54
Control	.95	1.28	

Sig. < .01 level

means of writing achievement at the conclusion of the study and this difference was statistically significant below the one percent level.

Table II illustrates the findings in respect to the writing achievement in

Table II

Prewriting Sample - Ideas/ Content Holistic Score - Grade 6

Sample	Mean	Standard Deviation	t Test
Experimental	2.5	.84	-2.55
Control	3.3	1.0	

NS

the area of Ideas/Content. There was a mean difference of .8 between the experimental and control group at the onset of the study.

Table III illustrates the post writing Ideas/ Content area of writing.

Table III

Post Writing Sample - Ideas/ Content Holistic Score - Grade 6

Sample	Mean	Standard Deviation	t Test
Experimental	3.63	.76	.30
Control	3.7	.66	

NS

There was no significant difference in the post writing scores between experimental and control group writing samples in the area of ideas/contents. A marked gain in ideas/ content holistic score for the

experimental group is seen when compared to prewriting results (2.5 vs. 3.63).

Table IV indicates the prewriting samples achieved in the area of

Table IV

Prewriting Sample - Word Choice Holistic Score - Grade 6

Sample	Mean	Standard Deviation	t Test
Experimental	2.68	.89	.81
Control	2.9	.79	

NS

student "word choice" during writing using holistic scoring. As can be seen in Table IV there was a mean difference of .22 points between the two samples at the onset of the study.

Table V indicates the results of the post writing "word choice"

Table V

Post Writing Sample - Word Choice Holistic Score - Grade 6

Sample	Mean	Standard Deviation	t Test
Experimental	3.58	.69	-1.54
Control	3.25	.64	

NS

sample using holistic scoring. There was no significant difference between the two samples. The mean gain, as compared to the prewriting "word choice" writing sample, was minimal. At the end of the paired writing project, there was no significant difference in this area of writing between the two samples.

Table VI indicates the writing sample analysis of grade one tutored

Table VI

Writing Sample Analysis - Grade One (Experimental group)

Child	Sentences *	Words *
1	2 / 4	12 / 22
2	1 / 2	5 / 12
3	2 / 8	24 / 42
4	2 / 5	14 / 54
5	1 / 4	21 / 34
6	1 / 2	7 / 36
7	2 / 5	18 / 17
8	2 / 6	22 / 43
9	1 / 4	6 / 21
10	2 / 4	1 / 47
11	2 / 3	12 / 32
12	1 / 6	21 / 31
13	2 / 4	16 / 45
14	1 / 2	3 / 16
15	2 / 9	29 / 53
16	1 / 5	20 /34
17	1 / 9	15 /50
Total	26 / 82	246 / 589
Average	1.5 / 4.8	14.5 / 34.6

Writing Sample Analysis - Grade One (Control group)

Child	Sentences *	Words *
1	2 / 2	12 / 25
2	1 / 3	2 / 23
3	1 / 3	7 / 21
4	1 / 1	6 / 14
5	3 / 3	14 / 28
6	1 / 4	2 / 29
7	1 / 3	7 / 16
8	2 / 3	15 / 23
9	2 / 4	27 / 50
10	2 / 2	10 / 11
11	1 / 2	3 / 15
12	2 / 3	18 / 28
13	2 / 2	16 / 19
14	1 / 2	23 / 23
15	1 / 4	5 / 24
16	1 / 2	4 / 8
Total	24 / 43	171 / 357
Average	1.5 / 2.7	10.7 / 22.3

* Pre and post study writing sample

students and grade one non-tutored students. Results show the average number of words and sentences used in the prewriting and post writing sample. There was a sentence count per child in the experimental group of 1.5 sentences per writing on the onset of the study and an average of 4.8 sentences per writing at the end of the study. The difference was an average gain of 3.3 sentences per child per story writing. There was a "word count" average of 14.5 words per child in the experimental prewriting study sample and a post writing sample "word count" of 34.6 words per child at the end of the study. The difference was an average gain of 20.1 words per child per story writing.

Table VII indicates the writing survey percentage comparison of grade

Table VII

Writing Survey Percentage Comparisons – Grade 6 (Post-study % Differential)

Questions	Strongly Agree *	Agree *	Undecided *	Disagree *	Strongly Disagree *
1	+6 / -15	+15 / +20	-16 / +5	0 / -10	-5 / 0
2	+26 / -35	+5 / +25	-9 / +5	-15 / -5	-5 / +10
3	+52.5 / -20	-53 / +35	+5.5 / -15	+5 / 0	0 / 0
4	-6 / +20	+25 / +5	+21 / -25	+5 / 0	-5 / 0
5	+6 / +15	+5 / 0	-11 / -10	0 / -5	0 / 0
6	-5 / +5	+52 / -30	-36 / +30	-11 / -5	0 / 0
7	+21 / -10	-11 / +15	-10 / 0	0 / -5	0 / 0
8	+16 / -20	+32 / -10	-53 / +15	+5 / -5	0 / 0

* Experimental/Control group

six students in paired and non-paired groups.

Questions one, two and three show gains in cross age paired grade six students in the area of "agree" and "strongly agree" when asked how

they perceive themselves as writers. Sample questions are located in Appendix E. Questions five, seven, and eight showed gains in cross age paired grade six students in the area of "agree" and "strongly agree" when asked how they think they are perceived by others in their writing.

Table VIII illustrates the findings in respect to post writing survey

Table VIII

Writing Survey Percentage Comparisons – Grade 1 (Post-study % Differential)

Questions	Yes *	No *	Maybe *
1	+35 / +12	0 / +1	-35 / -13
2	+24 / -6	-12 / +7	-12 / -1
3	+35 / -19	-12 / +6	-23 / +13
4	+36 / +13	-6 / 0	-30 / -13
5	+59 / +6	-30 / -13	-29 / +7
6	+47 / -25	-12 / +6	-35 / +19
7	+46 / -19	-29 / +7	-17 / +12
8	+35 / +13	-18 / +6	-17 / -19

* Experimental/Control group

percent differential of both grade one tutored students and non-tutored students. Questions one, two, three, and four show gains in cross-age paired students when asked how they perceive themselves as writers. Appendix F contains sample survey for grade one students. Question five, six , seven and eight show gains in cross aged paired students when asked how they think others perceive them as writers.

Conclusions and Implications

The hypothesis of the study was that there would be no significant difference in achievement between cross aged paired students and non-

paired students in the process of writing. The hypothesis would be accepted except that there was a significant difference between the two writing samples. Therefore, the hypothesis must be rejected.

The significant difference between the two writing samples occurred in the holistic writing sample. According to the statistics from the holistic writing sample, cross age paired grade six students performed significantly below the one percent level with a mean difference of 1.35.

Although the comparisons of the prewriting and post writing between the paired and non-paired groups generally showed no significant differences, the essential area of focus was the mean gain. While children who were paired with more able writers improved their "ideas/content" holistic score by 1.13 points, the non-paired writers improved their score by .4 points. A portion of this growth can be attributed to a growth of six weeks between prewriting and post writing. The area of "word choice" holistic scoring showed paired writers improved their score by .90, while the non-paired writers improved their score by .35 points. The experimental group scored .33 points higher than the control group at the end of the study.

The results of the grade one paired writing student and the non-paired student showed significant difference in total words and sentences between the prewriting and post writing sample. The tutored students averaged 1.5 sentences in the prewriting sample and 4.8 sentences in the post writing sample. The average sentence per story writing in the non-tutored student was 1.5 in the prewriting and 2.7 in the post writing sample. The average word count of 14.5 per story writing increased to 34.6 per story writing in the

tutored group while the non-tutored student only averaged 10.7 in the prewriting and increased to 22.3 in the post test.

The student writing sample showed the paired grade six students increasing in post study percent differential. Cross age paired students showed greater gain from their pre-survey "no" or "maybe" responses to their post "yes" responses. Non-paired students showed slight gains in their "yes" responses but also increased in their "no" and "maybe" responses. A contributing fact to this difference between groups may be in their past writing experiences and writing experiences during the study. The tutors became responsible and confident while working with younger students, and as "teachers" they became active learners.

Many useful writing skills were shared between paired writers and a friendship developed between many partners. The tutors needed to increase their skills to provide the support necessary to help the grade one students. Listening to the cross age paired partners during their writing sessions, one could hear both students asking questions during the writing process, discussing sentence structure, deciding upon creative words, and organizing their thoughts and ideas together. This study, therefore, has shown that cross age paired writing is a worthwhile technique to improve writing achievement.

Cross-Age Peer Group Tutoring
Related Literature

Institutionalized peer tutoring began as an educational experiment during the early 1970's. Today it is an accepted part of American colleges and universities almost everywhere. Focused at first almost exclusively on writing, peer tutoring eventually found its way into general education or "core" programs and sometimes even into upper division courses. There is hardly a college or university now, from Berkeley to Brown to Harvard that could do without it [Bruffee, 1993].

Peer and cross age peer tutoring has deep roots, no doubt to prehistoric times. Tutorial instruction, such as parents teaching their offspring how to make fire and to hunt and adolescents instructing younger siblings about edible berries and roots, was probably the first pedagogy among primitive societies [Jenkins,1987].

The benefits of one-to-one tutoring are supported by research. In 1982, Cohen, Kulik, and Kulik [1982] compiled a meta-analysis of findings from 65 independent evaluations of school tutoring programs showing that these programs had a positive effect on the academic performance and attitude of those who receive tutoring. The tutored students outperformed control students on examinations and developed positive attitudes toward subject matter covered during the tutoring program. The meta-analysis also showed that tutoring programs have a positive effect on students who are the tutors. The tutors are also helped during the learning sessions with improved understanding of subject matter taught, and a more developed positive attitude of the material taught [Cohen, Kulik, and Kulik. 1982].

Performance-based education [OBE] is introducing changes in the structure of America's traditional education. In 1984, the Far West Laboratory for Education, directed by Dr. Spady, applied for a six hundred dollar grant to "put outcome-based education in place in our American schools" [Luksik, Hoffecker]. For more than a decade this model has included restructuring the following:

- one-track system [eliminating the general track]
- multiage grouping [including ungraded primary]
- longer blocks of class time
- longer school year
- peer tutoring

Grouping of students within OBE will include no grouping by ability but faster or older students tutoring slower or younger pupils [Luksik, Hoffecker]. The importance of peer tutoring to increase achievement is incorporated into model programs.

Change has been also taking place in our traditional schools over the past thirty years. We seem to be relearning the virtues of integration of the language arts, cooperative learning, peer assistance, discussion, hands-on-curricula, and multi-age groupings [Putnam, 1994].

The advantages of small group or peer tutoring are the following: first it allows for integration of critical thinking and other language processes. Talking, listening, writing, and reading can be interrelated, and the spoken word can interact with the written word; second, by creating opportunities for

learners to experience and observe the learning of others, it permits them to expand their repertoire of learning strategies; third, it breaks down the isolation and stigma frequently experienced by children with insufficient literacy skills and provides peer support for their learning; fourth, it could enhance the learners' esteem by helping them understand that they have much to offer as a result of the teaching experience; fifth, it creates a cooperative, collaborative, participative environment that fosters interdependence of learners.

The Russian psychologist L.S. Vygotsky advanced the idea that students' readiness might be described as "the zone of proximal development" [Vygotsky,1978]. This zone is the area between a child's unaided performance and his performance when supported and guided by someone with greater knowledge and experience.

Vygotsky strongly believes that learning occurs as a collaborative effort between adults and children, with competence acquired gradually. Older cross-age peer tutors with their "greater knowledge and experience" provide the support for younger. Tutors support the tutees and encourage them to perform increasingly difficult tasks within the "zone of proximal development."

Vygotsky researched composition theory which examines the development of inner and oral speech. Acquisition and development of oral speech are primarily a means of social contact that develops to serve real and immediate needs. Oral speech continues to develop because of the motivation for its need. In contrast to the oral speech are the written

language skills that require formal training, concentration and effort. Vygotsky believes that written language is more difficult than oral speech. It is difficult because it involves abstract processes, contains technical elements, deliberate effort, a more complex linguistic structure than inner and oral speech, and a syntax opposite that of inner speech on which its production depends. [Capps, 1991]. Knowledge, thought and learning are social and collaborative acts. Language that includes thought and action is used in writing, and writing communicates many different thoughts within each student [Randic, 1991].. Tutors can bring the abstract world and the realistic world together for the tutee. Contemporary focus on the writing process and writing for meaning could be scaffolded by the peer tutor and cross age peer tutor within the zone of proximal development.

Kenneth Bruffee's concept of collaborative learning, based on Vygotsky, is essential to the writing classroom with four different types of strategies that can be employed in the writing. Collaborative efforts can include the following: 1. ask students to reveal their writing experiences, writing problems and attitudes toward writing; 2. use word associations so that students can learn a variety of ways to organize their thoughts; 3. situate learning in the students' cultures using their ideas or themes; 4. guide their research rather than direct it [Randic, 1991].

At Parkside School in Ajax, Ontario, a program using reading buddies was implemented with fifth grade students and younger students. Concerns about this model centered on the following questions: 1. Do buddy activities benefit both older and younger students? 2. Will students be motivated, be

given variety, and be challenged? 3. Will purpose, objectives, and growth be accurately evaluated and assessed? Activities were centered around themes using Big Books with students working together in reading and writing. Some of the activities included dramatization, letter writing, "What am I" games, and projects found in the Project Wild Guidebook [Canadian Wildlife Federation]. The reading and writing connection was to immerse the child in meaningful literacy activities with the child developing vocabulary and natural, purposeful communication skills. Revisions were made in the second year with increasing a more thorough follow-up on at least one activity in one class. Children were able to research individually and monitor their own growth and metacognition. Results indicate that reading buddies were successful with social and emotional growth and developing literacy, and the children practiced being in charge of their learning [Morrice, Simmons, 1991].

L. Leland and R. Fitzpatrick [1994] worked with sixth grade and kindergarten students who were teamed to read and write in collaboration. Subjects of the project were older students who "choose not to read on a regular basis" and who have developed cognitive skills but choose to limit their school-related participation in reading-related activities. The setting was a college laboratory school with 24 "below" grade level students according to the results of the California Test of Basic Skills. Sixth graders were empowered by sharing their knowledge of reading and writing with an appreciative kindergarten audience based on the belief that the younger

students would benefit as well since cross-age peer programs are strongly supported in literature on emergent literacy.

Constructivist learning theory "calls for an understanding and implementation of the notion that the student takes ownership for learning and the teacher provides appropriate direction and support" [Flood & Lapp, 1990]. The Leland and Fttzpatrick project was designed according to the constructivist perspective. The sixth graders developed a sense of ownership by gradually accepting the responsibility for planning the sessions, choosing the books to read, and preparing activities. [Leland, Fitzpatrick, 1994]. The results indicated that both the older and younger students increased their reading. It was also determined that instruction in skills and strategies connected to real-life contexts were necessary to make learning succeed.

A meta-analysis of findings from 65 independent tutoring programs conducted by Cohen, Kulik, and Kulik [1982] showed the effects on the tutees' self-concept and their attitudes toward the younger children involved. Results indicated that significant results were achieved in all of the features studied related to the structure of the program. Tutoring programs that were more structured and of shorter duration showed greater gains. Eight studies out of eight showed that student attitudes were more positive among the students in the tutoring programs, but only one study reported a significantly high result to be statistically reliable. Self-concept of tutee results indicated that seven out of ten studies showed greater gains in students within the tutoring programs. The other three results showed self-

concepts were more favorable without the tutoring programs. These programs have definite and positive effects on the academic performance and attitudes of those who receive tutoring. Tutored students outperformed their peers on examinations, and they expressed more positive attitudes toward the subjects in which they were tutored. Tutoring programs also have a positive effect on children who served as tutors [Cohen, Kulik, and Kulik, 1982].

The one-on-one tutoring provided to struggling first grade readers by Reading Recovery, a teacher- student tutoring program, enabled many of the students served to read at a level equal to their classroom peers [DeFord, Lyons, & Pinnell, 1991]. Recently, DeFord, Lyons , Pinnell, Bryk, and Seltzer [1994] reported that there are more powerful effects with one-on-one Reading Recovery than with small-group Reading Recovery. This later finding is in line with the overall finding that one-on-one instruction is more effective than instruction given in small groups [Juel, 1996].

Based upon the benefits of cross age tutoring for poor readers, [Cohen, Kulik, & Kulik, 1982] , Juel reported that University student-athletes who were poor readers seemed to be effective tutors of first grade students who were poor readers. The year-long study with 30 dyads were examined. Scaffolding or modeling processes which measured reading, writing, and attitudes toward school were administered. The tutored children attended an urban school in a major Southwest U.S. city that has considerable poverty, crime, and drugs, and which was considered an all-minority school. Tutors were noneducation majors who scored poorly on the Nelson-Denny Reading

Test [1981] and were below twelfth grade level in reading and study skills. Assessments were conducted on tutees in the area of alphabet recognition; Stones[1979], a Concepts About Print test; word recognition; spelling; The Diagnostic Test of Basic Decoding Skills; attitude toward reading assessment. The tutoring program consisted of reading children's literature, writing, "My Book" which consists of word books containing high frequency words from the basal and new words from phonics instruction; journal; alphabet book; hearing word sounds; letter sound activities; and assessment. Part of the program's success is built upon a structured teaching procedure, assessment, and tutor training. Results indicate the tutee group significantly surpassed the control group [$F\{1, 27\} = 21.3$ $p<.001$]. The tutors had a mean grade equivalent of 9.25 in August and a mean equivalent score of 13.5 in May. In contrast the control group had a mean equivalent of 11.5 in August and a mean equivalent score in May of 12.6. The student-athletes scaffolded reading and writing lessons using the work of Vygotsky's " zone of proximal development "[1978]. This current study supports the use of cross-age tutoring to benefit the poor reader tutor and tutee.

Co-operative pair-work has potential in the classroom using peer tutoring, cross age tutoring or reciprocal peer tutoring. The one-to-one tutorial relationship, maintaining a difference of about two years in ability between the students is the usual form of organization [Topping, 1989]. All major research reviews on the effectiveness of peer tutoring in reading have shown that the tutors accelerate in reading skill at least as much as the tutees [e.g., Sharpley and Sharpley]. The absolute competence in reading

of the tutors is not of great significance, but it is their competence relative to that of the tutees [Topping, 1989].

If the difference in ability between tutor and tutee is great and the reading materials are controlled at the level of the tutee, the tutor is likely to be under stimulated. On the other hand, if the tutor is only slightly more skilled than the tutee, the tutor will be unable to provide a model of reliable competency for the purportedly weaker member of the pair [Topping,1989].

Topping's paired reading was originally designed for parent-child tutoring use and was successful in adult literacy support. Peer tutoring has advantages in that studies have shown evidence of more positive self-concept in the tutor and tutee, improved attitude toward reading for the pair, improved social relationship for both, and there is evidence that children with learning and behavioral difficulties can benefit greatly from this arrangement [Topping, 1989]. The use of tutored Paired Reading was first reported by Winter and Low [1984]. Since this study, Topping reported on the results compiled using peer tutoring and paired reading data from ten projects in which the tutees ranged in age from eight to fourteen years and the tutors from eight to eighteen years [Topping, 1987]. During the intensive period of the project, the tutees gained in reading age 3.8 times the "normal" rate [assuming 1 month of reading age gain in 1 chronological month to be "normal"]. The tutors gained 4.3 times normal rates, in those projects where the tutors were also tested [Topping, 1989]. A factor that determined success of the program included organization of the program with appropriate selection and matching of pairs.

Another report involved 372 students engaged in 15 peer tutored Paired Reading projects with results analyzed according to sex combinations [Topping and Whitely, 1988]. Mixed sex combinations in partners proved to be good for the tutee but poor for the tutors, but male-male combinations had very positive effects for both.

Cross age peer grouping is sometimes deliberately introduced to assure interest and variety to the program. One high school of 2,000 students automatically includes cross age peer tutoring in its program as part of the English [language arts] schedule [Topping, 1989]. Benefits of peer tutoring include simplicity, ease of delivery and use, high cost-effectiveness and a very broad spectrum of application [Topping, 1989].

University of Massachusetts at Dartmouth students have organized a peer and cross-age tutoring Reading and Writing Center and provide this service five days a week to support the "process" approach to writing and have trained students to coach the tutees without doing the writing for them.

Thinking of writing as social, collaborative, and constructive tells a good deal about how colleges and university teachers and textbooks should be teaching writing and expecting students to learn it. One implication is that, as much as they might like to, college and university teachers and textbook writers cannot *tell* students how to write. Instead, because writing is itself a displaced form of conversation, teachers have to find ways for students to learn to engage in constructive conversation with one another about writing [Bruffee, 1993].

Writing is an opportunity for peers or cross age peers to have a conversation. Students learn, through writing, how to converse with each other through the writing steps: finding a topic, deciding what to say and how to organize the statements, developing material and organization, and assessing their own work.

A Writing Center at Oak Knoll, fostered writing in a setting where enthusiastic, non-judgmental peers would tutor fellow students. H. Marcus [1984] describes the three changes the center hoped to effect: that negative attitudes would decrease; students' concept of audience would grow; and responsibility of students would increase. The Writing Center provides support for courses, speeches, newspaper articles, poems, and short stories for publication and essays for admission to colleges. During the first year 30 percent of students in grades seven through ten used its services and the second year it serviced over 80 percent. Not only has improvement in writing taken place but the role of the tutor has become a respected and a sought-after position [Marcus, 1984].

Dunmore Elementary Center in Dunmore, Pennsylvania was the site of a study by DePaulo, Tang, Webb, Hoover, Marsh, and Litowitz in 1989 to determine age differences in reactions to help in a peer tutoring context. The study concluded that adults have shown that help which highlights recipients' inferiority, inadequacy, or dependency vis-a-vis their helpers is threatening to their self-esteem. The help is especially threatening when the tutor is similar to the tutee. The tutor may succeed to escape from the helping situation that may be demeaning to him [DePaula, Tang, Webb, Hoover, Marsh, and

Litowitz, 1989]. The measure indicated that a positive climate was created in the theoretically more supported helping arrangements. In the dyads in which the tutors and tutees differed in both age and achievement [relative to those in which they differed only in age], the children tended to feel relatively better liked by each other. The tutors that were older than the tutees sounded friendly in the cooperative condition when a prize was to be received if they scored the highest score. In sum, tutors in the cooperative conditions - particularly those who already possessed the teacher-like qualities of being high achievers and older than their students- seemed to be especially adept at enacting the role of a good teacher [DePaulo, Tang, Webb, Hoover, Marsh, and Litowitz, 1989]. Although the tutors performed relativity better in the cooperative than in the control conditions, the tutees did relatively worse. In the cooperative conditions in which the tutors were older than their tutees, the performance of the tutees was especially poor. This short term study posed several questions: 1. Could a long term study bond students and would this increase academic achievement? 2. Would pairing students with a difference of more than two years of age increase achievement? 3. Could tutees perform higher if the tutors were lower in achievement? Long term research is needed to investigate these questions.

S. Heath and L. Mangiola [1991] established a cross-age tutoring program in which grade 6 and grade 1 students worked collaboratively in a Literacy Club. The older students were identified as the Rapid Readers and the younger students as the Little Readers. Research showed great gains for both tutors and tutees even when the children being tutored and the tutors

were from special education backgrounds [Topping, 1987]. The children in this study had English as their second language; their primary languages included: Hmong; Khmer, Lao, and Vietnamese. Throughout the years, it has become surprisingly evident that the tutoring program should not be a frill to be included only if time is available, but the core of empowering student-centered learning around which much of the curriculum is organized[Urzula, 1995]. There were several successful aspects of the Literacy Club: Rapid Readers were able to learn to predict using easy-to-read books which made the task easier for them but would have been insulting for them to do alone; Rapid Readers responded favorably to the responsibility given to them and were encouraged to think of new ways to help Little Readers; the writing was a personal reconstruction of knowledge that they gained showing an interaction of cognition and language [Urzula, 1995].

Using their native language in classroom activities developed a positive attitude toward their bilingualism and strengthened their literacy skills in both languages. Recognizing the cultural variety among students and their abilities and using this will enhance reading, speaking, and writing.

According to the research conclusions of Lebbo and Teale [1990] cross age tutoring helped poor readers in the reading process. They based their work on Cohen, Kulik, and Kulik's [1982] meta-analysis of research in cross age tutoring which showed tutoring can make gains in achievement and attitude. Lebbo and Teale focused on cross age storybook reading to try to help underachieving fifth grade readers. The cross age program included preparation, pre-reading collaboration, reading to the kindergartners, and

post-reading collaboration. Data compiled included quantitative tests and qualitative data. Observational information was recorded in teacher notebooks and indicated fluency/expressiveness, behavior, questions asked by tutors, how the tutors activated background information, and problems encountered. The Gates-MacGinitie post-test scores indicated gains for the tutoring group. Gates-MacGinitie post-test scores were significant, F [2,14] = 18.52, p <.001 [adjusted means: Readers = 18.52; Art Partners = 46.91; Basal = 43.94]. A post hoc analysis using the Scheffe test of multiple comparisons indicated that the Readers scored significantly higher than the Art Partners [p< .006] who, in turn, scored significantly higher than the Basal group[p< .002]. A Chi square analysis of metacognitive awareness of reading strategies reported among the three groups for pretest/post-test gains showed a significant difference at the p < .001 level favoring the Readers [Reader gains = +9; Art Partners gains = +3; Basal gains = -1] [Labbo, Teale, 1990]. The success of the program was in part due to the following: using story framework students to increase comprehension, rereading to increase reading fluency, repeated mental modeling to help tutors become more efficient readers, and the instructional program in which the tutors were trained to provide for the tutees.

Research for peer and cross age tutoring has shown benefits to the tutor and tutee in social and cognition development. Positive outcomes difficult to measure such as friendships and long term behavioral changes have been discussed and offer additional favorable support for tutoring in the classroom. There are additional benefits of tutoring: children adopt more

positive attitudes, values and skills through modeling; through interaction children learn to share, help, comfort and empathize with others; peer relations have an influence on achievement; peer relationships have a powerful influence on a child's development and autonomy [Benard, 1990].

Peer and cross peer tutoring have gained support in the schools because of the encouraging benefits in student achievement, collaborative relationships, empowerment of the students to take responsibility for their own learning, and the cost factor benefit of implementing a tutoring program.

Years of research provide evidence of the benefits of peer tutoring and school achievement. Research relating reading achievement, self concepts and attitude support the relationship of peer tutoring and school gains. However, clear evidence about the effect cross age peer tutoring has primarily on children's creative writing and writing in the process area in the elementary school has few and ambiguous results. Tracing the relationship of cross age peer group tutoring and writing between grade six and grade one students will provide instructional data to administrators, teachers, students and parents for writing instruction and support that will enhance academic competence.

The value of tutoring is summarized by Hedin [1987], who advises us to follow Comenius' distum, "qui docet, discit" [he who teaches, learns] and to take seriously the strong evidence that academic achievement and personal growth of both tutor and tutee are usually enhanced by this method [Leland, Fitzpatrick, 1994].

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Appendices

Appendix A

Writing Survey Raw Scores – Grade 6
(Prior to writing study)

Questions	Strongly Agree *	Agree *	Undecided *	Disagree *	Strongly Disagree *
1	1 / 4	9 / 9	8 / 5	0 / 2	1 / 0
2	0 / 7	10 / 5	3 / 6	5 / 2	1 / 0
3	2 / 11	14 / 5	2 / 4	1 / 0	0 / 0
4	6 / 1	4 / 8	8 / 10	0 / 1	1 / 0
5	2 / 0	6 /11	11 / 8	0 / 1	0 / 0
6	1 / 0	3 / 11	13 / 8	2 / 1	0 / 0
7	4 / 7	11 / 6	4 / 5	0 / 2	0 / 0
8	1 / 4	1 /6	17 / 9	0 / 1	0 / 0

* Experimental/Control group

Writing Survey Raw Scores – Grade 6
(After writing study completion)

Questions	Strongly Agree *	Agree *	Undecided *	Disagree *	Strongly Disagree *
1	2 / 1	12 / 13	5 / 6	0 / 0	0 / 0
2	5 / 0	11 / 10	1 / 7	2 / 1	0 / 2
3	12 / 7	4 / 12	3 / 1	0 / 0	0 / 0
4	5 / 5	9 / 9	4 / 5	1 / 1	0 / 0
5	3 / 3	7 / 11	9 / 6	0 / 0	0 / 0
6	0 / 1	13 / 5	6 / 14	0 / 0	0 / 0
7	8 / 5	9 / 9	2 / 5	0 / 1	0 / 0
8	4 / 0	7 / 8	7 / 12	1 / 0	0 / 0

* Experimental/Control group

Appendix B

Writing Survey Percentages – Grade 6
(Prior to writing study)

Questions	Strongly Agree *	Agree *	Undecided *	Disagree *	Strongly Disagree *
1	5 / 20	48 / 45	42 / 25	0 / 10	5 / 0
2	0 / 35	53 / 25	16 / 30	26 /10	5 / 0
3	10.5 / 55	74 / 25	10.5 / 20	5 / 0	0 / 0
4	32 / 5	21 / 40	42 / 50	0 / 5	5 / 0
5	10 / 0	32 / 55	58 / 40	0 / 5	0 / 0
6	5 / 0	16 / 55	68 / 40	11 / 5	0 / 0
7	21 / 35	58 / 30	21 / 25	0 / 10	0 / 0
8	5 / 20	5 / 30	90 / 45	0 / 5	0 / 0

* Experimental/Control group

Writing Survey Percentages – Grade 6
(After writing study completion)

Questions	Strongly Agree *	Agree *	Undecided *	Disagree *	Strongly Disagree *
1	11 / 5	63 / 65	26 / 30	0 / 0	0 / 0
2	26 / 0	58 / 50	5 / 35	11 / 5	0 / 10
3	63 / 35	21 / 60	16 / 5	0 / 0	0 / 0
4	26 / 25	48 / 45	21 / 25	5 / 5	0 / 0
5	16 / 15	37 / 55	47 / 30	0 / 0	0 / 0
6	10 / 5	68 / 25	32 / 70	0 / 0	0 / 0
7	42 / 25	47 / 45	11 /25	0 / 5	0 / 0
8	21 / 0	37 / 40	37 / 60	5 / 0	0 / 0

* Experimental/Control group

Appendix C

Writing Survey Raw Scores – Grade 1
(Prior to writing study)

Questions	Yes *	No *	Maybe *
1	9 / 7	1 / 2	7 / 7
2	7 / 9	3 / 1	7 / 6
3	7 / 14	4 / 1	6 / 1
4	6 / 4	2 / 1	9 /11
5	6 / 8	5 / 3	6 / 5
6	7 / 14	3 / 1	7 / 1
7	4 / 10	6 / 1	7 / 5
8	7 / 8	4 /1	6 / 7

* Experimental/Control group

Writing Survey Raw Scores – Grade 1
(After writing study completion)

Questions	Yes *	No *	Maybe *
1	15 / 9	1 / 2	1 / 5
2	11 / 8	1 / 2	5 / 6
3	13 / 11	2 / 2	2 / 3
4	12 / 6	1 / 1	4 / 9
5	16 / 9	0 / 1	1 / 6
6	15 / 10	1 / 2	1 / 4
7	12 / 7	1 / 2	4 / 7
8	13 / 10	1 / 2	3 / 4

* Experimental/Control group

Appendix D

Writing Survey Percentages – Grade 1
(Prior to writing study)

Questions	Yes *	No *	Maybe *
1	53 / 44	16 / 12	41 / 44
2	41 / 56	18 / 6	41 / 38
3	41 / 88	24 / 6	35 / 6
4	35 / 25	12 / 6	53 / 69
5	35 / 50	30 / 19	35 / 31
6	41 / 88	18 / 6	41 / 6
7	24 / 63	35 / 6	41 / 31
8	41 / 50	24 / 6	35 / 44

* Experimental/Control group

Writing Survey Percentages – Grade 1
(After writing study completion)

Questions	Yes *	No *	Maybe *
1	88 / 56	6 / 13	6 /31
2	65 / 50	6 / 13	29 /37
3	76 / 69	12 / 12	12 / 19
4	71 / 38	6 / 6	23 / 56
5	94 / 56	0 / 6	6 / 38
6	88 / 63	6 / 12	6 / 25
7	70 / 44	6 / 13	24 / 43
8	76 / 63	6 / 12	18 / 25

* Experimental/Control group

Appendix E

Listed below are statements about writing. Please read each statement carefully. Then circle the letters that show how much you agree or disagree with the statement. Use the following:

SA	=	Strongly Agree
A	=	Agree
U	=	Undecided
D	=	Disagree
SD	=	Strongly Disagree

Example: **I think pizza with pepperoni is the best.** SA A U D SD

1. I think I am a good writer SA A U D SD
2. I like to write. SA A U D SD
3. I am getting better at writing. SA A U D SD
4. I can stay on topic when I write better than before. SA A U D SD
5. My teacher thinks my writing is fine. SA A U D SD
6. My classmates think I am a good writer. SA A U D SD
7. People in my family think I write well. SA A U D SD
8. People like to listen to my written work. SA A U D SD

Appendix F

Example: **I think pizza with pepperoni is the best.** **Y N M**

1. I think I am a good writer. Y N M
2. I like to write. Y N M
3. I like to write on my own. Y N M
4. Writing makes me feel good. Y N M
5. My teacher thinks that my writing is fine. Y N M
6. My classmates think that I am a good writer. Y N M
7. People in my family think I am a good writer. Y N M
8. People like to listen to my written work. Y N M

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