Over the last 2 years, Accelerated Literacy Learning (ALL) has experimented with the small group model in early literacy intervention, with success comparable to that in one-to-one intervention. There can be little doubt that intervention provided to struggling readers is most effectively initiated at an early stage. The ALL program was conceived on Marie Clay's recommendations, and for 8 years operated successfully in 10 Florida county school districts with a one-to-one ratio. Yet, the ALL implementation was not without resourcing problems. Many students qualified for the program but there were not enough ALL-trained teachers to work with them. Therefore, in an attempt to reach children who could not be served with a one-to-one ratio, educators experimented with a one-to-three small group model. The remainder of this paper describes the implementation and presents the results of work with a small group model. The paper discusses the group of three innovations by comparing them with one-to-one early literacy interventions such as Reading Recovery and strongly advises having both one-to-one and small group possibilities for each teacher. It finds that the data support expanding teacher training to include learning how to accelerate the literacy development of at-risk first graders in the context of a small group. (Contains 18 references, 2 tables, and a figure.) (NKA)
A Small Group Model for Early Intervention in Literacy:

Group Size and Program Effects

Susan Homan
James R. King
Kris Hogarty

University of South Florida - Tampa
EDU 162
4202 E. Fowler Ave.
Tampa, FL 33620

(813) 974-1062 (office)
(813) 974-0938 (fax)
king@tempest.coedu.usf.edu
Early literacy, young children learning to read and write, underwent a paradigmatic shift with the research and writing of John Downing (Downing and Thackray, 1971) and Marie Clay (1979). These changes in theory resulted in early intervention programs designed to accelerate at-risk first graders. The first and most widespread of these programs was and is Reading Recovery (RR). The Reading Recovery program, which was developed by Clay (1993a, 1993b), popularized the one-to-one early intervention model for literacy. The year-long teacher training model designed by Clay has been credited with helping teachers change the way they think about emergent literacy and, therefore, the ways that they teach literacy (Brashears, Homan, & King, submitted for publication; Lyons, Pinnell, & DeFord, 1993). Longitudinal results from the RR program strongly support the benefits of early intervention with a strong teacher training component. Years of program data support that a one-on-one program can successfully accelerate at-risk first graders’ literacy to equal that of the average students in their classes (Pinnell, Lyons, DeFord, Bryk, & Seltzer, 1994).

The success of RR has fostered additional early intervention programs around the US (Success for All, KEEP, Early Intervention in Reading, Writing to Read, Hiebert’s (1994a) Chapter 1 model, and Accelerated Literacy Learning). In Florida, the Accelerated Literacy Learning program (Short, Frye, Homan, & King, 1999; 1997), a one-on-one early intervention program similar to Reading Recovery, has been successfully training teachers who provide one-to-one early intervention for the past 10 years. Program results support an acceleration rate for at-risk first graders similar to that of the RR program students (Short, Frye, Homan & King, 1999; 1997; yearly reports for 10 Florida counties).
While many school districts nationwide were pleased with the results of one-to-one early intervention programs such as RR and ALL, they have found that the cost of these programs has often made their implementation prohibitive. In the very schools that are most needy, those with the largest low-SES populations, having one or two early intervention teachers in an elementary school would barely scratch the surface of their needs for intervention in literacy. This has lead many administrators, teachers, and reading researchers to question the costs versus the benefits of a one-to-one program (Hiebert, 1994b). The study reported in this article compares the results of a one-to-one model and a small group model for first graders at risk in literacy.

Taylor, Strait, and Medo (1994) support one-to-one programs such as RR and ALL for early intervention, as well as small group, Chapter 1, pull-out models like that developed by Hiebert (1994a). In one such program, Early Intervention in Reading (EIR; Taylor, et al., 1994), classroom teachers provided 15 to 20 minutes of supplemental instruction to a group of 5 to 7 of the lowest emergent readers in their first grade classrooms. At the end of the 3 day lesson cycle, Taylor, et al. (1994) reported that students could read the story introduced on the first day with 92% accuracy. Taylor cautioned that EIR should not be the only supplemental program for these struggling emergent readers. Based on their research, only 1/3 of the children that were included in EIR were reading at the appropriate first grade level at the end of first grade. One possible explanation for the 2/3 of the total program students below grade level might be group sizes of 5 to 7.

In the late 1980's, Slavin and Madden (1989) reported that, until group size in early intervention was reduced to a one-to-one ratio, intervention wouldn't make a difference. In contrast, by the mid 1990's, Heibert (1994a) was reporting success with groups of 3. Like the
Taylor EIR model for early intervention, the teachers in Hiebert’s study also experimented with group size. Before training in the intervention program, the teachers had worked with groups of 6 or 7 students. When these teachers tried implementing the new program with groups that large, they realized it would not be effective. Therefore, they reduced the group size to 3 and were more successful. Teachers reported the larger group size made appropriate feedback and involvement too difficult: There appears to be a pattern toward a smaller group of 3 as an appropriate configuration for early intervention in literacy. Over the last two years, Accelerated Literacy Learning (ALL) has experimented with the small group model in early literacy intervention, with success comparable to that in one-to-one intervention.

**Moving Early Intervention to Groups of Three**

There can be little doubt that intervention provided to struggling readers is most effectively initiated at an early stage. Much teacher work and literacy research has supported the positive effects of early intervention. Yet, even with our collective professional wisdom regarding the positive effects of early intervention it has been difficult finding the necessary funding. Clay (1993b, p. 8), an early and consistent advocate for early intervention in literacy, has strongly recommended the one-to-one framework. The Accelerated Literacy Learning program (ALL) was conceived on Clay’s recommendations, and for eight years operated successfully in ten Florida county school districts with a one-to-one ratio. Yet, the ALL implementation was not without resourcing problems. Clay’s notion of full implementation was discussed by Smith-Burke and Jaggar (1994, p. 67) as a district training enough teachers to cover the lowest 20%-25% of first graders. Following this view, the poorest districts, perhaps the most in need, would have to train the most teachers. Typically this involves the large, inner city
school districts. In the state of California, 40% of the children would have qualified for Reading Recovery services (Hiebert, 1994b). One of Florida’s most populous counties, the 5th largest school district in the US, had a similar situation. In this large district, with a great percentage of students who qualified for ALL services, the curriculum leaders realized the need for a district-wide implementation. District-wide implementation would mean training 127 teachers in one year. But, even with that number, there wouldn’t be enough ALL-trained teachers to work with all the children who would qualify for the program.

Because of the large need and small funds, the cost of a one-to-one model for early literacy intervention was seen as prohibitive. Therefore, in an attempt to reach children who could not be served with one-to-one ratio, we experimented with a one-to-three small group model. The remainder of this paper is devoted to a description of that implementation and to a presentation of the results of our work with a small group model. We discuss the group of three innovations by comparing them with one-to-one early literacy interventions such as Reading Recovery (see Pinnell, Fried & Estice, 1990) and ALL (Short, Frye, Homan & King, 1999; 1997).

ALL’s Small Group Intervention Model

Moving from one reader to three in early literacy intervention groups has offered the ALL program new possibilities and new challenges. As ALL teachers formed groups of three children, they attempted to closely match students based on Diagnostic Summary (Clay, 1993a) scores, need areas, and areas of strength. However, our at-risk first grader readers’ acquisition of independent reading strategies remained idiosyncratic, even at the same reading levels. These differences between readers have been the single most challenging aspect of our small group
work. The same difference, seen as a decision making context, has also been the cause of much of our learning about the teaching power of the social groups, and flexibility of what is referred to in the literature as "early intervention".

Changes in the Parts of the ALL Lesson

The structure of ALL lessons is based on recommendations provided by Clay (1993b) for the Reading Recovery Program. A helpful description of a typical lesson frame based on Clay is found in Pinnell, Fried, and Estice (1990). We will now introduce each lesson part of the ALL lesson as it was originally implemented in the one-to-one model. We follow these descriptions with the variations that resulted from our small group innovations. Then, we reflect on the costs and benefits of using these variations.

Familiar Reading. This first ten minute lesson segment is actually made up of two parts, familiar reading and Running Record (Clay, 1993a). In familiar reading, easy and familiar books are read to increase a reader’s fluency, to build comprehension, and to boost a reader’s confidence. Clay (1993b) states:

...the practice of rereading familiar books encourages confidence and fluency, and provides practice in bringing reading behaviors together (orchestration) but it also allows the reader to discover new things about print during the rereading. The control over the text allows attention to shift to features of the text or story not previously attended to. (p. 38)

In a group of three, variations such as choral reading and echo reading become possible. Choral reading involves all three readers with a familiar book reading simultaneously. Echo reading, where readers repeat what the preceding reader did, establishes a model for less proficient
readers. Buddy reading, two of three students reading together and the teacher pairing up with the third child, can also be done during familiar reads. Mumble reading, or simultaneous reading of a story at individual paces, engages all readers. While using any of these techniques, ALL teachers can focus on individuals for quick, in context, teaching points.

Of course each of the previous adaptations has its own inherent complexities. We suggest that group choral reading may be most inclusive, but may create a greater challenge for the teacher for her observation of individual readers. Taking turns, for example by the page, allows ALL teachers to monitor individuals, but it may also disrupt a cohesive, meaningful reading experience for the individuals. Teaching points, which are based on teachers’ diagnostic observations of oral reading behaviors, usually occur after a segment of reading. Though infrequent in familiar reading, teaching points may also be used here. Teachers’ decisions on which teaching points to consider are more complex in a group setting than in a one-to-one lesson. When a teacher intends to focus on the behavior of a single child, she can also be seen as possibly interrupting (unproductively) the work of another reader who may not need the feedback from the teacher. In some instances, the focus chosen for a single child may be beneficial to one or both of the other children in the group. We have found that an ALL teacher’s focus on process level strategies (monitoring, searching, cross-checking) becomes a very important guideline for deciding when it may be productive to interrupt reading with a teaching point. Our belief is that it is certainly more productive to interrupt with strategies and questions that support cue and strategy use than item level, or specific word or skill. It appears to be even more so within a small group because modeling and transfer to others may occur. Where a focus on a specific word is necessarily based on individual readers’ needs, a teacher focus on strategies will
more likely be one that other readers may incorporate at the time the teacher's prompt is used.

Running Records. In Running Records (Clay, 1993a), teachers record the oral reading behaviors of a single child in order to understand a reader's strategy use and to formulate lesson plans.

While the child is reading, the teacher watches for and records behaviors such as substitutions, self-corrections, omissions, and insertions. After the lesson, the teacher analyzes the record, making inferences as to the child's use of cues...and hypothesizing about the child's use of strategies. (Pinnell, Fried, & Estice, 1991, p. 284)

This is necessarily one-to-one work. When an ALL teacher works in a small group, it becomes necessary to split up the group and focus attention on a single child during the taking of a Running Record. Many ALL teachers keep a small basket of familiar books near a bean bag chair and have the two non-focus children buddy read, choral read, or read independently from the basket of books. We see this as additional, albeit unsupervised, familiar reading. Their reading is barely audible, and does not disturb the Running Record child. Most ALL teachers are able to conduct two running records during each lesson, and thereby cycle through their group efficiently. A Running Record for two out of three days for each child can keep a teacher adequately informed on the progress of each of her readers. The choice of the focus children for Running Records is also related to the focus child for the writing segment of the lesson. From our perspective, by focusing on two children (individually) during the Running Record, and the third child during writing, ALL teachers maintain their awareness of strategy use by each individual.
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Writing. The second ten-minute segment of the ALL lesson is devoted to writing. As Clay (1993b) states “The focus of this section [writing] is getting the child to compose and write his own stories. It is also about constructing words from their parts” (p. 28). It is through this construction that readers are taught to slow down the reading process in order to hear the sounds in the words that they already know. In this way, writing is productively used as a place for reading work. With the formulation of a sentence by the child, the student transfers the experientially known language from her/his head to the paper. This is the place where the student learns and improves phonemic awareness.

With a group of three, some ALL teachers have been able to facilitate the writing of three different sentences for three different students. However, three different sentences seems to keep the teachers’ attention on task completion, with less attention available for observing students’ strategy use. Another approach that seems more productive to us is the selection of a focus child for the writing segment. The focus child formulates and dictates the language story (sentence). This small routine operates like a one-to-one dictation, with the other two children participating minimally or watching. When it is time to start the shared writing of the dictated focus sentence, the teacher’s main attention stays with the focus child, even while the other two attempt the sentence dictated by the focus child. Teachers have productively used small (1 foot square) dry erase boards for the non-focus students. It can also be a good idea to have the group chant the sentence to oral familiarity before they start writing to increase their familiarity with someone else’s sentence. Our observations indicate that the non-focus children will make unanticipated errors as they attempt to write the dictated sentence. They are, after all, without close supervision, and writing a sentence that someone else has dictated. Mistakes that go unnoticed
Small Group Intervention

(unmonitored error) are more likely in-group instruction, but we maintain that through semi-guided practice, and through modeling, the shared writing in small groups is possible and even productive. The social interaction during the writing of a group sentence provides an opportunity for discussion in a real literacy context.

New Book Introduction. The purpose of the new book introduction is two-fold. First, it provides minimal familiarity with a book that will be used for the Running Record the next day. Secondly, the new book introduction provides a productive opportunity to teach and scaffold problem solving strategies with an unfamiliar text. As Pinnell, Fried, and Estice (1990) state:

In the introduction, the teacher does not read the book to the child; instead, the teacher and the child look at and talk about the pictures in the whole book.

Through oral language, the child has a chance to become familiar with the plot, the important ideas, and some of the language of the story. (p. 287)

Introductions to new books, discussions of background knowledge related to the story content, and previewing stories by discussing the pictures (picture walks) are easily transferable to a small group setting. In fact, students' cross talk during these prereading activities can be a rich source of information that will assist them in their reading. Beyond familiarity with the story content and structure, new book introductions are also productive for learning to use emerging strategies. In groups with three students, teachers have held a single book for the initial introduction and picture walk. Teachers have also used multiple copies of a story, and have conducted group book introductions. For all of these innovations, however, the teachers who choose them must do so while considering the lessons' overall purposes.

When introducing new books to small groups, ALL teachers must create opportunities to
hear individual student reading. Given the focus on strategy acquisition, ALL teachers in a group context must create reading occasions where individuals do the observable “reading work.” However, unlike the Running Record, all students remain in the group for the new book and teachers say things like “Now, let me hear Ronald read that last part.” Another teaching practice that seems to be productive is engaging students in brief labeling discussions of observed reading strategies. “What did you see Ronald do when he got stuck? Yes, he went back and tried again. That’s one of the things good readers do.” This can be a powerful teaching approach. However, all of these various interactions that occur during the new book introduction must be directed to the content and the strategy opportunities in the book at hand. It is critical that teachers who plan to use students’ group talk to develop background knowledge be familiar with the book so that they may contour the students’ talk to issues that relate to the story and the students’ work with it.

General Observations

We had anticipated that a three-part lesson for a group of three would take more time to accomplish than one for a single reader. In our attempts to stay as close to Clay’s guidelines as possible, we encouraged ALL teachers to keep a thirty minute lesson as a goal. We were surprised at the resulting economy of time use. Teachers’ efficient use of a limited amount of time for lessons has had at least three observable benefits. In constraining available time, we caused teachers to be more efficient with how they chose to use it, thereby making more strategy-based teaching choices. Secondly, the pace of the lesson and its duration kept readers constantly engaged. “Down time” for students was seen as unproductive and teachers learned to multi-task an ALL lesson in order to maximize students’ participation. Thirdly, keeping lesson time down
made more lesson time available for other groups of readers.

In their study of effective Reading Recovery teachers, Lyons, Pinnell, and DeFord (1993) reported a range of lesson times from 24:20 to 41:48 minutes, with an average time of 33:21 minutes, within an intense analysis of eighteen lessons. ALL lessons for one-to-one instruction mirror this finding. ALL lessons for groups of three range between 35 and 40 minutes. We have observed that, with the peer interaction that is possible in group lessons, first graders are comfortable with a slightly longer intervention lesson.

Another complexity in working with groups of three is that the students make variable progress toward acceleration and independence. It was common for teachers to be frustrated with either holding a child back within a group of three, or wondering what to do with a child who seemed to flounder in a group. We reminded ALL teachers that the training in ALL centers on accelerating readers’ independent use of strategies. Therefore, books, no matter what level, can become contexts for learning and practicing with strategies. Thinking in these ways, teachers may shift away from a more traditional perspective of moving readers through a predetermined sequence of book levels. Our observations suggest that the necessary decisions that teachers make for small group instruction also cause them to think about individuals within the group. We maintain that teachers can productively resolve issues that arise in the small group ALL model; that teachers benefit from thinking through their decisions; and benefit from talking their choices over with others. Sometimes moving a group member is the answer. We recommend that ALL teachers maintain a one-to-one time slot for this and other reasons.

Comparing Diagnostic Survey results for different group configurations

The method of determining the effect of ALL on reading achievement involves the
comparison of data from 3 groups: (a) students who received services for a minimum of 40 lessons or who became proficient readers, (b) a group of students from schools where ALL is offered who were identified as “Average” by classroom teacher’s judgment and specific assessments (Average group), and (c) a group of students from schools where ALL is offered who were identified as needing the ALL program but were not able to be served in the program (Comparison group). For this comparison of one-to-one and groups of three, we have included data from 24 schools sites that represent the range of SES levels in the county.

The following seven individually administered assessments are used as part of the assessment process in ALL:

1. **Concepts About Print Test** (CAP) measures forms of print concepts and book orientation, with a maximum score of 24 points (Clay, 1993a).

2. **Letter Identification** (LID) measures knowledge of the upper and lower case letters of the alphabet, with a maximum score of 54 points.

3. **Dictation Test** (DIC) assesses phonemic awareness by having each student attempt to write a sentence as it is dictated, with a maximum score of 37 points (Clay, 1993a).

4. **Writing Vocabulary Test** (WV) requires a student to write down all the words he/she knows in a specified time frame, with one point awarded for each word spelled and identified correctly (Clay, 1993a).

5. **Word Test** (WT) is a list of 15 words from a basal reading series, first grade level. The maximum score is 15.

6. **Phonemic Segmentation and Blending Test** (PS & B) measures phonemic awareness through verbal responses, with a maximum pretest score of 12 points and a maximum posttest score of 18 points (Taylor, 1990).

7. **Running Record** is a written record of oral reading behaviors (Clay, 1993a).

Table 1 presents the pre and posttest scores for the subtests of the Diagnostic Survey
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(items 1-5) and the PS&B (item 6) for students in the ALL program, for the Average group, and for the Comparison group. The column labeled "40 + lessons" includes students from both the one-to-one instruction and from the groups of three. From the data presented in Table 1, comparisons can be drawn for ALL program children at the beginning of the year and the end of the year on all six subtests. Similarly, the performances of Average children can be compared for beginning and end of year status, as well as performances for Comparison children. Further, comparisons between ALL children and Average children can be drawn for beginning and end of year performance on the different subtests.

While the beginning scores of children in the ALL program were much lower than those of the Average group, by the end of the program the ALL students were performing at levels as high as, or higher than, the Average children on each of the six subtests. The Comparison students had pretest scores somewhat lower than those of the ALL children, and end of year scores were also much lower than ALL children.

While all first graders appear to be learning the alphabet, the remaining five subtests reveal the impact of the ALL program for the at-risk children in the selected school sites. When these aggregated data are separated for group size comparison in Table 2, one can readily see the close performance on the posttests between the one-to-one and the group of three. This is confirmation of the productive results of groups of three in ALL as measured by Clay’s (1993a) Diagnostic Survey and Taylor’s (1990) Test of Phonemic Segmentation and Blending.

Running Record/Book Level Results

Students’ reading levels in the ALL program are measured with Clay’s (1993a) Running Record procedures. Students read aloud from a set of books that are ordered in increasingly
difficult levels. Teachers make a written record of students' oral reading and compute readers' accuracy rates.

Figure 1 presents the running record results for the one to one and group of three ALL children compared to the Average children, and the Comparison group. As with the Diagnostic survey data, Average students are the same group identified by their teachers. Comparison students are those who qualified for ALL services (bottom 20% of their respective classes). The book levels identified along the left hand side of the figure represent reading levels from very easy first grade levels (2-4) to late third grade level (30). Level 12 is approximately equivalent to late primer level. Level 16 is the approximate equivalent to the end of first reader level. The "O" level at the beginning of the year is indicative of a "non-reader".

The right hand side of the figure contains the interquartile range for the Average group. The vertical line between the two diamonds represents the range of reading levels for the middle 50% of the Average group of readers. The goal of the ALL program is to accelerate the at-risk readers to reading levels that match average performance. A comparison of the ALL children's end of year reading level with the average range (interquartile range) reveals the positive ALL program effects. The ALL program children in one-to-one instruction were reading at book level 24 (well into second grade level) at the end of their first grade year. Level 24 was at the high end of the interquartile range for the Average children (levels 14-28). For the group of three ALL students, the data presented in Figure 1 reveal that groups of three ALL children were reading at level 20 (beginning of second grade) at the end of their first grade year. Level 20 was at the middle of the interquartile range for the Average children (levels 14-28). Both one-on-one and groups of three children were reading in the average range for their classrooms and at levels
consistent with beginning of the second grade. These compelling results are evidence of the effectiveness of the ALL program. The success of the children and their teachers in the small group model is encouraging and supports the continued use and study of this model for early intervention.

Discussion

Size of Groups in early reading intervention

In justifying a tutorial approach to early literacy intervention, Slavin (1994) relies on Vygotsky’s (1978) zone of proximal development. In this model, what readers can complete is extended with the scaffolding of a knowledgeable adult. The one-to-one model is acknowledged as the optimum situation for scaffolding the struggling early reader. However, there has been little discussion about either the possibilities or the limitations of generalizing scaffolding to small reading intervention groups. Slavin’s comparison (p. 145-146) is made between one-to-one and whole classrooms. Yet, later, in a section titled “How many students can succeed and at what cost?”, Slavin acknowledges

[t]hat the number who will succeed in fact depends on the resources schools are willing to devote to ensuring success for all (sic) and the willingness to reconfigure the resources already devoted to remedial and special education and related services. (p. 216)

After several years of close contact with school districts, we understand that adequate resources are not being (nor cannot always be) directed toward early intervention in literacy simply because it is a good thing. Few can argue with the positive effects of programs that are delivered in a one-to-one structure. However, as Slavin has so clearly pointed out, the expense of that kind of
commitment is still a stumbling block for many school districts' implementation of an effective, district-wide early intervention in literacy.

Pinnell, Lyons, DeFord, Bryk, and Seltzer (1994) also compared small group instruction of Reading Recovery with a one-to-one model. They suggested:

The adjustment to group instruction requires teachers to modify RR teaching procedures and to devise new techniques they think are consistent with the theoretical base developed during their training. (p. 18)

After our two years of implementing a small group model, we completely agree with Pinnell, et al. We would add, however, that the children's responses to these changes are part of the teachers' decision making. Further, such resiliency is what allows for the adaptation and extension of early intervention models to new challenges. In terms of their observational results for small group models, Pinnell, et al. report that 28% of available time was spent on reading, 24% on writing, and nearly half of the time was spent on "other" tasks. From our perspective, this "other" category comprises a sizable amount of the instructional time. It is probably not unlike the amount of time our small group teachers originally spent on task management. However, when the teachers have weekly discussion about materials management and student participation structures as part of their training, the teachers end up becoming more efficient with a set of problem solving strategies dedicated to reducing non-instructional time. This shift has allowed for more reading and writing time. While we strongly support one-to-one tutorials as an optimum literacy intervention for both children and teachers, we also recognize the importance for many school districts of being able to meet the instructional needs of larger numbers of struggling first grade readers. We suggest that our results with the small group model for ALL
justify the continued study of small groups in early literacy intervention. We strongly advise having both one-to-one and small group possibilities for each teacher. There will always be some children who will only accelerate in a one-to-one situation.

Becoming a successful reader can change the life of a child. The community of literacy teachers and researchers must continue to experiment with approaches to expand support to every child in need. After two years of working with groups of three, the data support expanding teacher training to include learning how to accelerate the literacy development of at-risk first graders in the context of a small group.

References


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Comparison

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# Table 2

## Beginning and End of Program Results

**ALL Program - One-to-One and Groups of Three Service**

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<td>6.77</td>
<td>26.90</td>
</tr>
</tbody>
</table>
Figure 1 presents Book Reading performance for the ALL program. On average, ALL children, in one-to-one instruction, read at level 24 at year end. All children in group of 3 instruction read at level 20 at year end. Both level 24 and 20 represent second grade reading competence, and both levels are within the reading levels for average students.
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Signature: James R. King

Printed Name/Position/Title: James R. King/Professor

Organization/Address: University of South Florida - TAMPA

4202 E. Fowler Ave.

Tampa, FL 33620

Telephone: 813-974-0938

Fax: 813-974-0938

E-Mail Address: King@tempest.sfsu.edu

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