THE EFFECTIVENESS OF WHOLE LANGUAGE APPROACHES ON THE ORAL LITERACY SKILLS OF BILINGUAL PRE-SCHOOL CHILDREN IDENTIFIED AS SPEECH IMPAIRED

Elizabeth Ziminsky

Abstract: This investigation examined the effects of whole language methods on the average number of verbalizations per minute of bilingual pre-schoolers identified as speech impaired. The subjects received instruction through whole language methods over a 5 week period. All instruction was provided in the students native language--in this case, Spanish. No definite determination on the positive effects of whole language methods on increased oral production was resolved. However, increased motivation, eagerness and interest in activities when whole language methods were implemented were recorded.

REVIEW OF THE LITERATURE

During the 1950's and 60's, a growing concern began to be voiced by educators, parents and political leaders with regard to the poor literacy skills of American students and of the population as a whole (Gursky, 1991, Jewell & Zintz, 1986). Researchers noted that educators care a great deal about literacy development, yet, while both time and money have been devoted to improving literacy skills, nevertheless "reading problems have neither diminished nor have they gone away" (Jewell & Zintz, 1986, p. 82). In 1988 the National Assessment of Educational Progress estimated the number of functionally illiterate American adults to be more than one-third of the adult population (Gursky, 1991).

Limited English proficient (LEP) children are at greater risk than the mainstream population of not developing literacy skills (Baca & Cervantes, 1986, Cummins, 1984). In fact, the results of bilingualism and the education in native language of minority language students have become extensively debated and controversial issues in the field of education (Cummins, 1984). Research has documented that minority language students generally perform poorly in the area of reading achievement when compared to their Anglo peers (Baca & Cervantes, 1986). It follows then that educators working with LEP students exhibiting special needs are especially concerned with implementing effective practices to teach literacy to these students in their native language which is often referred to as "L-1" (Cummins, 1984).

One approach that has been implemented by many educators to develop and improve literacy skills is whole language (Dudley-Marling & Rhodes, 1988). This approach is a body of beliefs about learning, teaching and the role of language in the classroom that impacts upon the entire curriculum (McInerney, 1988; Raines & Canady, 1990). Proponents of whole language insist that the methods used by whole language teachers are more responsive to the needs and interests of children than are traditional teaching methods (Gursky, 1991). Educators and theorists disagree about the definition of whole language, this is due in part because the framework of whole language deals primarily with attitudes and beliefs and tends to be abstract (Eldridge,
THE EFFECTIVENESS OF WHOLE LANGUAGE APPROACHES

1991). There are however, some common beliefs and practices which are recognized by various educational authorities as comprising a whole language curriculum (Gutknecht, 1990). These beliefs and practices include the following:

1. Children in whole language classrooms are actively involved in a variety of experiences that reflect the purposes of language both within and outside of school settings.
2. A variety of print media is used within a classroom. The use of practice books and materials that focus primarily on skill development is limited--and not the primary area of reading intervention.
3. Oral language is focused upon as well as reading and writing, as an important component of language arts. It is virtually impossible to "teach" the various aspects of language in isolation as they develop interdependently.
4. Reading is an interaction among the reader, the text, the environment, and the reading process. The learner's experiential background is vital to the reading process and to comprehending material.
5. Content areas such as Science and Social Studies also provide opportunities for language development and growth, and should therefore be taught in a holistic manner.
6. Within a school day, time needs to be set aside for recreational reading of individually chosen material in addition to teaching isolated skills.
7. Children learn to write by practicing writing. Students are encouraged to complete creative stories, poems and riddles as well as a daily journal. "Invented" spelling is acceptable.
8. Children in whole language classrooms learn by example. Teachers also participate in recreational reading and creative exercises by reading and writing along with their students.
9. Teachers model language skills and provide for practice time of new competencies and "old" skills which may not yet be mastered. Practice time must be planned for as students refine their reading and writing skills.
10. Assessment of student performance is ongoing. Evaluation of student's performance is based on student work, competency growth, conferencing between student and teacher, and self-evaluation by students rather than on comparison of scores on achievement tests.

METHODS

Subjects

The subjects chosen for this study were three Hispanic students; Julio age 4-0, Rafael age 3-7, and Ruthie age 3-7, who had been identified and classified as speech impaired by the Committee on Pre-school Special Education, and had recently been placed in a bilingual, language based pre-school classroom. All three students had been determined to be Spanish dominant through both administration of the Bilingual Language Proficiency Profile and as a result of interviews with parents regarding language used at home prior to the students beginning in the program.

Therefore, all past instruction had been provided in Spanish, and continued to be provided in Spanish throughout the study.

Procedures and Instrumentation

A multiple probe design was used for this study. A multiple probe design is one in which daily data collection for the dependent variable is not necessary. The dependent variable measured was the average...
number of verbalizations per minute. This design allowed the instructor to increase time spent on direct
instruction. It should be noted, however, that prior to implementing intervention with the next student, daily
data were collected for that student's baseline for a minimum of three days (Bailey, Sugar, & Wolery, 1988).
Baseline data were recorded during non-structured free play sessions, by one of two trained observers.

To collect the baseline data the observer sat in close proximity (approximately 6 feet away) to each student
who was being observed, one at a time during a 45 minute freeplay period. Each freeplay period was divided
equally into three 15 minute intervals (first, second, and third). Each day the observer varied the interval
during which she recorded verbalizations for each student. For the purpose of this study, only
comprehensible verbalizations were recorded. Comprehensible verbalizations were defined as all utterances
recognized by the observer as words and excluded utterances such as sound effects, grunts, "huh?" and
"um". As comprehensible verbalizations were recorded, the observer also noted what type of verbalizations
were uttered (e.g. asking questions, responding to questions and commenting). Based on the information
recorded during each 15 minute interval, the subjects' mean length of response (MLR) was determined on a
daily basis. MLR was the total number of comprehensible verbalizations uttered during the interval. Each
subjects' MLR was then used to determine their average number of verbalizations per minute, by dividing
the MLR by 15.

During the freeplay period the children were allowed to select any activity they wanted to participate in;
selecting toys (e.g. housekeeping, cars, blocks, farm animals, etc.), looking at books, painting at the easel
drawing and cutting, playdough or puzzles. The children generally took part in at least 3 different activities
during a freeplay period.

The intervention for this study consisted of direct instruction utilizing various whole language techniques
during the daily "circle time". Circle time consisted of three 12 minute sessions during which the instructor
worked with the three subjects individually. The interval during which the instructor worked with each
student (1st, 2nd, or 3rd) was also varied in a consistent manner on a daily basis. The teacher told students a
story using props, flannel board or puppets. Emphasis was placed on story retelling and concept
development. The same story was used for 5 consecutive days, Monday through Friday. If a student or the
instructor was absent on any day, the activities were extended for that period of time. Throughout the
implementation of the whole language activities, the instructor prompted and or modeled appropriate
responses and behavior as necessary.

After the teacher read the story to the students any one of several intervention activities would be
implemented.

These intervention activities included:

1. Student retelling of the story using props.
2. Student retelling the story using flannelboard.
3. Student role-playing the story using various props.
4. Student making a book to retell the story.
5. Student retelling story and teacher recording it on a language experience chart.
6. Story related art, science, games or cooking activities, with emphasis on the teacher and student
discussing the story and concepts.

Due to time constraints, not all of the above mentioned activities were used in conjunction with each story,
but the same set of activities was used with each student. Table 1 provides an example of a set of activities
for one language theme.

Following the implementation of the whole language activities, an observer followed each student individually for a 15 minute interval during freeplay and recorded the number of comprehensible verbalizations uttered during that interval. The interval during which the subjects' verbalizations were recorded were varied on a daily basis from first to third.

Table 1- Language Theme: The Very Hungry Caterpillar by Eric Carle

<table>
<thead>
<tr>
<th>DAY</th>
<th>ACTIVITY</th>
<th>CONCEPT/SKILL DEVELOPMENT</th>
</tr>
</thead>
</table>
| 1   | Teacher reads story | • Vocabulary development  
      |                       | • Listening skills       |
| 2   | Teacher and student use flannel board to tell story | • Vocabulary development  
      |                       | • Story retelling & sequencing |
| 3   | Student tells story using flannel board  
      | Make a paper caterpillar | • Vocabulary development  
      |                       | • Story retelling & sequencing  
      |                       | • Fine motor abilities      
      |                       | • Colors                   |
| 4   | Student tells story using flannel board  
      | Make a paper butterfly | • Vocabulary development  
      |                       | • Story retelling & sequencing  
      |                       | • Fine motor abilities      
      |                       | • Colors                   
      |                       | • Following directions     |
| 5   | Make fruit salad | • Fine motor abilities  
      |                       | • Counting               
      |                       | • Number concepts         |
      |                       | • Vocabulary development  
      |                       | • Following directions    |

RESULTS

During intervention, language samples recorded for each student during freeplay were used to determine their MLR, which was in turn used to calculate each students' average number of verbalizations per minute by dividing MLR by 15. Table 2 displays daily MLR and daily average number of verbalizations per minute for each subject during baseline and intervention. Daily target rates of 5.0, 2.0 and 2.0 verbalizations per minute were established for subjects 1, 2 and 3 respectively. The baseline data was used to determine those specific target rates for each student.
Table 2 reflects the daily average number of verbalizations for each student. It is evident that the daily average number of verbalizations for each of the students, both during baseline and intervention, were unstable and variable. When one coalesces these data into either averages (i.e. mean or ranges, one loses the obvious trend in the children's language patterns. For example the range in the average number of verbalizations per minute during baseline were: S1 = 2.8-5.1; S2 = 1.1-2.7; S3 = 0.5-2.6. During intervention these were: S1 = 3.5-6.5; S2 = 1.4-6.2; S3 = 2.2-5.6. The mean of the daily average number of verbalizations per minute during baseline were S1 x = 3.8; S2 x = 1.9; S3 x = 1.6. During intervention these were 4.97, 4.1 and 3.53 for subjects 1, 2 and 3 respectively.

It is obvious therefore that both the trend and level stability for all subject was variable. Both the trend and level stability for all three subjects was variable during baseline. The change in trend stability between conditions was variable for all three subjects. For S1 the introduction of intervention activities resulted in an accelerating-improving trend in the average number of verbalizations per minute following a decelerating-decaying trend recorded during baseline. Data for subjects 2 and 3 showed a decelerating-decaying trend in the average number of verbalizations per minute after intervention activities were implemented, which followed an accelerating-improving trend recorded during baseline.

Table 2 - Average Daily Number of Verbalizations Per Student

<table>
<thead>
<tr>
<th>Days</th>
<th>S1</th>
<th>S2</th>
<th>S3</th>
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<tbody>
<tr>
<td>1</td>
<td>3.7</td>
<td>.</td>
<td>0.8</td>
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<tr>
<td>2</td>
<td>.02</td>
<td>.</td>
<td>1.6</td>
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<td>3</td>
<td>4.4</td>
<td>.</td>
<td>1.4</td>
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<td>4</td>
<td>5.1</td>
<td>.</td>
<td>1.2</td>
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<tr>
<td>5</td>
<td>4.2</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>6</td>
<td>3.7</td>
<td>.</td>
<td>0.5</td>
</tr>
<tr>
<td>7</td>
<td>2.8</td>
<td>.</td>
<td>1.1</td>
</tr>
<tr>
<td>8</td>
<td>3.1</td>
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<tr>
<td>9</td>
<td>4.1</td>
<td>.</td>
<td>2.1</td>
</tr>
<tr>
<td>10</td>
<td>4.0</td>
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<tr>
<td>11</td>
<td>6.5</td>
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<tr>
<td>12</td>
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<tr>
<td>15</td>
<td>4.5</td>
<td>1.7</td>
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<tr>
<td>16</td>
<td>5.2</td>
<td>2.1</td>
<td>.</td>
</tr>
<tr>
<td>17</td>
<td>5.8</td>
<td>2.7</td>
<td>2.6</td>
</tr>
<tr>
<td>18</td>
<td>5.7</td>
<td>4.7</td>
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<tr>
<td>19</td>
<td>4.6</td>
<td>6.2</td>
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<td>3.5</td>
<td>2.6</td>
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<td>5.4</td>
<td>3.2</td>
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<td>22</td>
<td>3.5</td>
<td>3.9</td>
<td>.</td>
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<tr>
<td>23</td>
<td>3.9</td>
<td>5.0</td>
<td>.</td>
</tr>
<tr>
<td>24</td>
<td>6.2</td>
<td>5.0</td>
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## DISCUSSION

Although the results of the study were variable, some gains were made by all 3 subjects. Data recorded for subjects 2 and 3 show that with the exception of one day for subject 2 (day 26) both subjects were verbalizing at or above their daily target rates which was an average of 2.0 verbalizations per minute. Data for subject 1 showed that he was verbalizing at or above his target rate of 5.0 verbalizations per minute on 12 out of 21 days during which he participated in the whole language activities.

The variability of the data may be due in part to several different factors. These include how the subject felt on a particular day, who was recording the data, and medication ingested by the student. For example, on
many days when the students verbalized less, they were usually tired and voiced this. On days 32 and 36 subject 3 was recorded as having an extraordinarily high number of verbalizations. It was later determined through teacher-parent contact that the subject had been taking cough medication. On days when the observer recording data was someone other than the teacher, subject 1 would actually say, "I'm not going to talk to you." The most important factor however may be the time frame within which the study needed to be completed. A total of 7 weeks was available during which time both baseline and intervention were carried out. Approximately 5 of those weeks were used for the intervention, although this was less for subjects 2 and 3 as a multiple probe design was used for this study, and certain criteria had to be met during baseline before intervention activities could be implemented. In order to get a true feel for the effectiveness (or lack of), of the intervention the researcher feels that a minimum of 4 months would be necessary.

Four major positive factors of the whole language activities was the interest, eagerness, and motivation of the students. They were constantly asking if it was their turn yet to work with the instructor, and even on days when they did not feel well, when given a choice they wanted to work on the activity of the day.

When compared to more traditional instructional methods whole language advocates can refer to very little empirical data which has documented the effectiveness of whole language methods. In part this is due to the nature of whole language theory and methods which are largely qualitative and therefore difficult to express in quantitative terms. The implications of this study demonstrate that further research is necessary. Without documentation that demonstrates a strong relationship between whole language methods and language progress, advocates of the philosophy cannot expect it to be seriously considered as an alternative to traditional instructional methods. It can however, be said that these methods are part of what every instructional program should include given the needs of language minority students. It is particularly important that future research be conducted with this population.

REFERENCES


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Ms. Elizabeth Ziminsky is currently teaching in a self contained classroom that serves primary aged students who are classified as developmentally disabled and are from homes where Spanish is the primary language spoken. This research study was conducted as the culminating activity for her Masters of Science in Education (M. S. Ed.) degree in the Bilingual Special Education Program, Department of Exceptional Education, State University College at Buffalo, Buffalo, New York

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