To investigate the relationship between a kindergartner's prior experience with print and the child's scores on Marie Clay's Concepts About Print Test, a study examined 23 kindergarten students from an upper middle class neighborhood. A 27-item questionnaire was given to parents at the beginning of the school year, asking what their children knew about letters and words, how their children used these words in their play, how the parents supported their children's interest in reading, and what kind of words they were learning. The Stone: Concepts About Print Test (a 24-item instrument developed to assess a child's knowledge of print conventions such as correct book orientation, directionality of print, visual word boundaries, etc.) was administered individually during the first 3 weeks of school. Results indicated that print awareness can be predicted by measures of prior experience with print in the home. (Three tables of data are included, and the parent questionnaire and the scoring standards for the Clay Concepts About Print Test are appended.) (MM)
The Relationship Between Prior Experience With Print and Reading Readiness

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The Relationship Between Prior Experience With Print and Reading Readiness

What does a typical child know about reading before going to school? This would seem to be a reasonable question. But it is not a question that has a simple answer. The answer is complicated not so much by research as by the implicit models of reading and by the hidden assumptions frequently made about how children learn. One problem is that the field of reading is not in agreement about how reading occurs and about how to teach children to read. Consider, for example, the number of alternative programs purporting to show effective ways to teach beginning reading. One reading program is based upon the assumption that reading has a linear quality. Proponents of this model emphasize that the process is initiated with letters, words, or their sounds and then proceeds to larger units of text. In other beginning reading programs the reading process, as well as its instruction, is not linear but interactive and tightly bound to meaning. Many of the language experience programs follow this model.

A second problem to answering questions about what a child knows about reading before going to school is found in assumptions about how children learn. Despite research to the contrary, many educators appear to believe that what children learn or are able to learn is profoundly limited by their age or maturity as discussed in the introduction. To countermand beliefs that children's instruction ought to be based on their maturational level of development, knowledge about reading needs to be shown as a function not only of natural endowment but of various experiences of being read to, of learning letters and having signs and labels identified, of printing and spelling letters and words, and of learning that reading and writing is both meaningful and useful.

The purpose of this study is to investigate the relationship between a kindergarten child's prior experience with print, as reported on a questionnaire completed by the child's parents (Mason, 1982), and the child's scores on the Marie Clay Concepts About Print Test (Clay, 1986).

Hypothesis

There will be no significant relationship between a child's prior experience with print, as reported on a questionnaire completed by the child's parents (Mason, 1982), and the child's scores on the Marie Clay Concepts About Print Test (Clay, 1986).

METHODOLOGY

Subjects

The subjects in this study were from a kindergarten class of twenty-three students, eleven girls and twelve boys. The class
was from an upper middle class neighborhood. Twenty-two of the children had two parents living at home and, underscoring the traditional nature of these families, only six mothers had a full-time job outside the home. Of the students tested, one was a child for whom English is a second language and one child was diagnosed as having a severe chemical imbalance was taking medication for Attention Deficit Syndrome. Two students were reading above the first grade level prior to entering the kindergarten class and two students were additional year students. The mean age of the subjects was 5.6 years.

Instruments

A twenty-seven item questionnaire (Mason, 1982) was given to parents at the beginning of the school year. Most of the questions required multiple choice responses, asking parents what their children knew about letters and words, how their children used these words in their play, how the parents supported their children's interest in reading, and what kind of words they were learning.

The researcher used the Stone: Concepts About Print Test developed by Marie M. Clay in 1979 to examine the child's print awareness. This test was designed to aid teachers, diagnosticians and researchers in gaining insight from a child's involvement with written language. The test is a twenty-four item instrument developed to assess a child's knowledge of print conventions such as correct book orientation, directionality of print, visual word boundaries, concepts about letters (upper and lower case), words, and marks of punctuation. It is administered individually by reading a short narrative approximately seven-ten minutes in length to the child from a booklet. On each page of the booklet, the examiner asks a question pertinent to an area of print awareness and records a dichotomous score (right or wrong) based on criterion responses for each item provided by Clay.

Procedures

A permission form was distributed to the parents prior to beginning the research. The questionnaire (Mason, 1982) was distributed at the kindergarten parent orientation meeting in September, 1987. The Stone: Concepts About Print Test was administered individually during the first three weeks of school in a small room adjoining the classroom. The administrator was a colleague with ten years early childhood experience.

Results

The data was collected for this study in the fall of the school year 1987. Twenty-three subjects were examined with a measure of print awareness, Stone: Concepts About Print (Clay, 1986), following the completion of the parent questionnaire of the child's home experience with print (Mason, 1982). Means and
standard deviations for subjects' scores on the parent questionnaire and the print awareness test are given in Table 1.

Table 1

<table>
<thead>
<tr>
<th>Questionnaire</th>
<th>Stone</th>
</tr>
</thead>
<tbody>
<tr>
<td>mean</td>
<td>44.22</td>
</tr>
<tr>
<td>standard deviation</td>
<td>14.42</td>
</tr>
</tbody>
</table>

To test the hypothesis that prior home experience with print is not an environmental precursor of print awareness, a simple linear regression was used to analyze the data. As noted in Table 2, the results indicated a significant relationship between the predictor variable, the questionnaire, and the criterion variable, the test of print awareness, \( f(1,21) = 26.509, p<.0001 \). These results,

Table 2

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>ss</th>
<th>ms</th>
<th>F value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>1</td>
<td>141.097</td>
<td>141.097</td>
<td>26.509*</td>
</tr>
<tr>
<td>Residual</td>
<td>21</td>
<td>111.773</td>
<td>5.323</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>22</td>
<td>252.870</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*F > 4.32 significant at .05 level

significant at the \( p<.05 \) level as originally set, were evidence to support rejection of the null hypothesis.

Additionally, the results indicated that information about a child's experience with print in the home as reported by parents is a good measure of the child's print awareness. The questionnaire (Mason, 1982) accounted for greater than fifty percent of the total variance, \( r^2 = 0.558 \), when regressed on the Stone (Clay, 1986) test. Table 3 shows
Table 3

Simple Regression Results

<table>
<thead>
<tr>
<th>Y-Intercept</th>
<th>b-weight</th>
<th>r</th>
<th>r²</th>
<th>Sy.x</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.931</td>
<td>0.176</td>
<td>0.747</td>
<td>0.558</td>
<td>2.307</td>
</tr>
</tbody>
</table>

The statistical results of the simple regression technique. The prediction equation generated was \( y' = 4.931 + 0.176(x) \) where \( x \) is the parent questionnaire.

Conclusions

The study investigated the relationship between a kindergarten child's prior experience with print and the child's scores on a concepts-about-print test. Based on the research reviewed in this study, the acquisition of print awareness was predicted to be a function of prior experience with meaningful print in the home. As the results from the regression analysis indicated, print awareness can be predicted by measures of prior experience with print in the home. The results demonstrate that acquisition of print awareness, which is predictive of beginning reading success (Clay, 1966, Durkin, 1977) is partially a function of home experience with print as measured by the child's interest, knowledge, and use of print and by parental support for these experiences.
PARENT QUESTIONNAIRE
(Mason, 1982)

The answers to the following questions will give me information about your child's experiences with books and stories.

Child's Name_________________________Birthday___________
Sex________________Number of older siblings_________________
Date________________

Directions: For each question, please circle the response that comes closest to describing your child’s behavior.

Does the child point out and name letters of the alphabet when playing? seldom occasionally very often

How many different alphabet letters does the child try to print? less than 5 about 10 more than 20

Does the child recite the whole alphabet without any mistakes? seldom occasionally very often

If the child prints, what case does he use?
upper (capital letters) lower both

Does someone teach the child some reading skills?
none older brother or sister parent/other

If someone is teaching the child, what is being taught?
letter names letter sounds
printing letters printing words
reading words reading stories
spelling words other

Does the child read books by him or herself?
no occasionally often

What new words have you noticed your child reading? List as many as you can think of (but no more than 15) that he identified. For example, did he point out and read labels on food, words in books or magazines? We are interested here in which printed words your child noticed recently.

_________________________ ___________________________
_________________________ ___________________________
_________________________ ___________________________
How many printed words altogether do you think the child can read?  
less than 5  about 10  more than 20

Does the child ask for a printed word to be read to him?  
seldom  occasionally  very often

Does the child ask to have books or comics read to him?  
seldom  occasionally  very often

Does the child try to identify a printed word by sounding out the letters?  
seldom  occasionally  very often

Does the child spell out the letters in printed words?  
seldom  occasionally  very often

Does the child make alphabet letters when drawing?  
seldom  occasionally  very often

How many alphabet letters do you think the child can recognize?  
less than 5  about 10  more than 20

How often is the child read to at home per week?  
less than 1/2 hour  about 1 hour  more than 2 hours

How often does the child visit the public library?  
irregular  once or twice a month  weekly

Does the child have a subscription to a child's magazine?  
yes  no

Does the child ask to have favorite books reread?  
seldom  occasionally  seldom

What is the average time the child watches TV per day?  
less than 1/2 hr.  about 1 hr.  more than 2 hrs.

Does the child hear story records at home?  
seldom  occasionally  very often

Does the child watch Sesame Street on TV?  
seldom  occasionally  very often

Does the child watch Electric Company on TV?  
seldom  occasionally  very often

Does the child watch Saturday A.M. cartoons on TV?  
seldom  occasionally  very often

Does the child talk to parents about Sesame Street or Electric Company material?  
seldom  occasionally  very often
How often does the child go on outings with a parent (trips to special places, shopping, visits to friends, etc.) per week?

- less than twice a week
- about 4 times a week
- more than 6 times a week

Does the child own any alphabet books?

- no
- one
- several
<table>
<thead>
<tr>
<th>Item</th>
<th>Pass</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Front of book.</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Print (not picture).</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Points top left at 'I walked...'.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Moves finger left to right on any line.</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Moves finger from the right-hand end of a higher line to the left-hand end of the next lower line, or moves down the page.</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Word by word matching.</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Both concepts must be correct, but may be demonstrated on the whole text or on a line, word or letter.</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Verbal explanation, or pointing to top of page, or turning the book around and pointing appropriately.</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Score for beginning with 'The' and moving right to left across the lower line and then the upper line, OR, turning the book around and moving left to right in the conventional movement pattern.</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Any explanation which implies that line order is altered.</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Says or shows that a left page precedes a right page.</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Notices at least one change of word order.</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Notices at least one change in letter order.</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Notices at least one change in letter order.</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Says 'Question mark', or 'A question', or 'Asks something'.</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Says 'Full stop', 'Period', or 'It tells you when you've said enough', or 'It's the end'.</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Says 'A little stop', or 'A rest', or 'A comma'.</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Says 'That's someone talking', 'Talking', 'Speech marks', 'Print' (from computers).</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Located two capital and lower case pairs.</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Points correctly to both was and no.</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>Locates one letter and two letters on request.</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>Locates one word and two words on request.</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>Locates both a first and a last letter.</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>Locates one capital letter.</td>
<td></td>
</tr>
</tbody>
</table>