The relationships between noncognitive factors and reading readiness in elementary school children were studied. One hundred and ninety-two entering first graders (half Negro, half white; half boys, half girls) were selected in two rural Southern counties at the initial stages of a desegregation program. The socioeconomic level of the groups was controlled so that half of each group belonged in grades 6 and 7 and half belonged in grades 1 through 5. The Metropolitan Readiness Test and the Children's Self-Social Constructs Test (preschool form) were given within the first few weeks of school. After 6 weeks, teachers were asked to rate all subjects on 24 bipolar dimensions of classroom behavior including follows directions and talks to other children. Intercorrelational analysis based on the total sample indicated a high relationship between readiness and eight of the 17 variables. Among the eight, preschool education, teachers' ratings, and age were the best predictors. Among the other significant relationships were distance from teacher, realism for size, and preference for mother. The data seem to indicate that meaningful social experience is as important as training in decoding skills for reading readiness. References are given. (WL)
Some correlates of reading readiness among children of varying background

Edmund H. Henderson and Barbara H. Long
University of Delaware and Goucher College

Typical reading readiness tests measure a factor that may be termed perceptual-motor skill (Leton, 1963, Ohnmacht and Olson, 1968) and achievement on these measures has been shown to be a reliable predictor of success on primary reading tests (Robertson and Hall, 1942). It remains an open question, however, whether perceptual-motor skill is itself the critical element for readiness or whether this skill is part of a broader complex of development.

Piaget suggests (1963) that the attainment of particular levels of cognitive skills are not isolated events, but rather involve schemas which vary in complexity and repertoire as a function of maturation and the individual's action upon his total environment. Accordingly, one would predict that experiences with word forms, for example, might be necessary, but not sufficient, for success in beginning reading, and that a variety of non-cognitive experiential variables would predict this perceptual-motor skill and perhaps be a necessary concomitant of such achievement.

This study has attempted to investigate this aspect of primary education by exploring the relationships between certain non-cognitive variables and reading readiness scores among children of varying backgrounds.

Milner (1951) and Sutton (1955) have both reported numerous non-cognitive correlates of reading readiness, but their studies failed to include those controls that would permit conclusions to be drawn about the salience of
each variable, nor were differentiations made for background factors. Another line of research has shown a similar array of variables as judged by teachers to be sound predictors of reading achievement. (Robertson and Hall, 1942, Banhan, 1958). The recent work of Ilg and Ames (1965), Durkin (1961) and others along with the nation-wide concern for the effects of social deprivation have also emphasized the importance of maturational and environmental events for readiness.

Method

Subjects. Subjects consisted of 192 entering first graders (half white, half Negro; half boys, half girls) in thirteen schools in two rural Southern counties. These schools were, for the most part, segregated as to race, although a desegregation program was in its initial stages. In some of the communities, public school kindergartens were present; in others, private kindergartens. In all communities a six-week Head Start program was conducted. An attempt was made to control for socioeconomic level by use of the chief earner's occupation (half of each group were in classes 6 and 7 on Hollingshead's Occupational Scale, half in classes 1 through 5).

Procedure. All subjects were administered the Metropolitan Readiness Test within the first few weeks of first grade. In addition, within one week of school entrance, all subjects were tested individually with the Children's Self-Social Constructs Test (pre-school form). This test provides measures of (a) self esteem, (b) social dependency, (c) identification with and preference for mother, father, teacher, and friend,
(d) realism as to size, and (e) minority identification. Split-half reliabilities ranged from .48 to .75; median .73.

After six weeks of school, teachers rated all subjects on 24 bi-polar dimensions of classroom behavior, with the positive end of each scale exemplifying behavior considered to be mature. For example, "can work quietly", "is able to play in a group", "follows directions", "talks to other children", etc. These scales were partially derived from Medinnus's (1961) First Grade Adjustment Scale. The 24 ratings were summed to provide a single score; split-half reliability was .95.

Age in months, number of siblings, presence or absence of father in the home, and amount of pre-school education were obtained for each subject. In all 17 measures were related to the readiness scores. The various groups differed significantly on these measures as follows: Negroes were found to have significantly lower esteem, less pre-school education, less preference for father, and fewer fathers present in the home. Girls showed less identification with father, less preference for father, more preference for teacher, and were rated higher by teachers. On the readiness test, the Negroes obtained significantly lower scores. There was a trend (p = .10) for boys to obtain lower scores than girls.

Because of these differences the data were analyzed by intercorrelating all measures for the sample as a whole and for each sub-group. When pre-school education appeared to confound relationships between certain variables and readiness, additional analyses were carried out with preschool education controlled by the use of partial r's.

Intercorrelations for the total sample revealed eight of the 17 variables to be significantly related to readiness (p = .05 or better,
two-tailed test). The three best predictors (multiple $r = .62$) were pre-school education ($r = +.50$), teachers' ratings ($r = +.39$) and chronological age ($r = +.32$). Also related to higher readiness scores were three self-concept variables, and two family variables. Since these were also in most cases significantly related to pre-school education, partial $r$'s were computed controlling for this variable. With this control, teacher's ratings, chronological age, and father presence retained their statistically significant relationship with readiness. The other variables did not.

Since the groups differed significantly on a number of the above correlates of readiness as well as on readiness scores themselves, separate analyses for the Negroes and whites, and for the boys and girls were next carried out. Father presence was not found to be significantly related to readiness among the Negroes, nor among the whites, when pre-school education was controlled. For the self-concept measures, differential relations were found among the four groups. Readiness was associated with greater preference for mother among the girls and among the whites, less identification with teacher (i.e., greater distance from teacher) among the boys, and greater realism for size among the whites. With pre-school education controlled distance from teacher for the boys and preference for mother among the girls retained their significant relationship to readiness; the two self-concept variables among the whites did not.

Among each of the groups (see Table 1), pre-school education, teacher ratings, and chronological age were the most predictive, the latter two variables contributing significantly to the variance with pre-school
education controlled. Multiple r's from these three variables ranged from .51 to .71 among the four groups, stronger relations being found among the whites and among the boys.

When, as a further control, correlations were computed separately for the four sub-cells: white boys, Negro boys, white girls, Negro girls, the three prominent correlates retained their position. In nine of the 12 cases pre-school education, ratings and age were significantly related to readiness scores even in these smaller samples, and in three of the four groups these provided the best predictors of readiness. Multiple r's were .79 for the white boys, .64 for the white girls, and .62 for Negro boys. For the Negro girls, the relations were somewhat different. Social dependency, preference for mother, and pre-school education were the best predictors of readiness with a multiple r of .51.

Discussion

Compared to the variance contributed by the three main correlates (pre-school education, teacher ratings, and age) the self-social concepts appear to be of a lower order of importance. Nevertheless, two variables, (preference for mother among girls and distance from teacher among the boys), retain their significant relation to readiness with pre-school education controlled. These two variables were found in an earlier longitudinal study to increase significantly between kindergarten entrance and the end of first grade. It would appear from this that these self-social orientations are indicative of social maturity at this age. In addition, the social-dependency score which was predicative for the Negro girls has also been found associated both with social maturity and reading achievement in earlier studies.
Of more importance for reading readiness, however, are age, classroom behavior, and pre-school educational experience. Age, of course, is the most obvious and likely correlate of readiness even when, as is true for this sample, the range is a single year. Nevertheless, teachers often overlook this simple and readily available index. The present findings reassert the importance of chronological age for reading readiness and are in harmony with the position taken by Ilg and Ames.

Similarly it has long been recognized that teacher judgment based upon observation of classroom behavior is a sound predictor of reading readiness. The present study reaffirms this relationship and suggests the usefulness of this relatively simple and reliable scale for the assessment of social maturity in the first weeks of grade one.

Finally and perhaps most significant is the relative importance here found of pre-school experience for reading readiness. It was not possible to assign kindergarten attendance randomly, and therefore, some confounding with parents' income and education is probable. Nonetheless the consistency and strength of the relations both overall and for each subgroup would seem to attest to the value of kindergarten attendance.

Over the years, a substantial number of theorists (Betts, 1946; Gates, 1947, for example) have maintained a broad view of readiness and asserted that its appraisal and its accomplishment must include social, emotional and experiential factors. There are others, however, who reject this broad view and advocate early and direct training in letter form perception tasks (Flesch, 1955; Chall, 1967, for example). The findings of this study support the broad view since they show that a substantial proportion
of the variance of the readiness test in each group is accounted for by quite varied maturational-experiential factors. From these data one may reasonably conclude that meaningful social experience is as important for reading readiness as is specific training in decoding skills.
Some Correlates of Reading Readiness Among Children of Varying Backgrounds

Edmund H. Henderson and Barbara H. Long
University of Delaware and Goucher College

Table 1: Relationships between Metropolitan Readiness Scores and Preschool Education, Teachers' Ratings, and Chronological Age among the various groups.

<table>
<thead>
<tr>
<th>Sample</th>
<th>Total</th>
<th>Boys</th>
<th>Girls</th>
<th>Negroes</th>
<th>Whites</th>
<th>White Boys</th>
<th>White Girls</th>
<th>Negro Boys</th>
<th>Negro Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Children</td>
<td>192</td>
<td>96</td>
<td>96</td>
<td>96</td>
<td>96</td>
<td>48</td>
<td>48</td>
<td>48</td>
<td>48</td>
</tr>
<tr>
<td>Variables</td>
<td>r</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preschool</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education - A</td>
<td>Pearson</td>
<td>.50</td>
<td>.57</td>
<td>.44</td>
<td>.39</td>
<td>.58</td>
<td>.66</td>
<td>.49</td>
<td>.48</td>
</tr>
<tr>
<td>Teachers' Ratings - B</td>
<td>Pearson</td>
<td>.39</td>
<td>.43</td>
<td>.33</td>
<td>.33</td>
<td>.48</td>
<td>.40</td>
<td>.54</td>
<td>.48</td>
</tr>
<tr>
<td>Ratings - C</td>
<td>Partial</td>
<td>.32</td>
<td>.42</td>
<td>.22</td>
<td>.30</td>
<td>.44</td>
<td>.47</td>
<td>.40</td>
<td>.41</td>
</tr>
<tr>
<td>(A,Controlled)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chronological</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age - D</td>
<td>Pearson</td>
<td>.32</td>
<td>.38</td>
<td>.26</td>
<td>.24</td>
<td>.42</td>
<td>.46</td>
<td>.40</td>
<td>.26</td>
</tr>
<tr>
<td>(A,Controlled)</td>
<td>Partial</td>
<td>.27</td>
<td>.35</td>
<td>.22</td>
<td>.23</td>
<td>.36</td>
<td>.42</td>
<td>.34</td>
<td>.22</td>
</tr>
<tr>
<td>Preschool Ed.,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ratings, and Age - E</td>
<td>Multiple</td>
<td>.62</td>
<td>.71</td>
<td>.52</td>
<td>.51</td>
<td>.71</td>
<td>.79</td>
<td>.64</td>
<td>.62</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Best predictors for Negro Girls were Social Dependency (r = +.33)
Preference for Mother (r = +.31) and Preschool Education (r = +.30)
Multiple r = .51
References


