The purpose of this study was to determine whether achievement motivation can be taught by either of two approaches common to the kindergarten. After being pre-tested for motivational levels, subjects were randomly placed in three groups: (1) cognitive-direct teaching of components designed to enhance motivation, (2) Social-social interaction within, self-selected activities, (3) Control-continuation of regular activities. These representative groups consisted of 82 kindergarten children. Significant growth in motivational level occurred in both cognitive and social groups as compared with the control group (.05 level). Incorporation of motivational sequences into kindergarten curricula appears advisable. (Author)
The Effect of Social and Cognitive Interaction Strategies on Children's Motivation to Achieve in School

Robert G. Koep
Department of Curriculum and Instruction
University of Oregon, Eugene, Oregon

The primary purpose of this study was to determine whether motivation to achieve in school can be taught to kindergarten children. The secondary purpose was to ascertain whether a cognitively-oriented experience or a socially-oriented experience is more effective in regard to teaching kindergarten children motivation to achieve in school.

Eighty-two kindergarten children were selected for different forms of interaction designed to increase motivation for learning in the school setting. The complete sample was pre-tested by means of Cumpookies (Adkins and Ballif, 1968) for motivation to achieve in school. They were then randomly assigned to three groups - 29 in the cognitive group, 29 in the social group and 24 in the control group. The cognitive group were taught five pre-reading and pre-math skills of the Kindergarten Evaluation of Learning Potential (Wilson and Robeck, 1967) plus five covert responses hypothesized to be essential in developing motivation (Adkins and Ballif, 1970). The social group were encouraged to interact socially with their teacher and their peers in the context of self-selected materials and activities provided by the experimental teachers. The control group continued their regular kindergarten curriculum.

Six graduate students from the College of Education, acted as teachers in the project. To eliminate the teacher variable, each teacher was

assigned five subjects from the cognitive group, five subjects from the
social group and four subjects from the control group. The teachers'
pre-service training consisted of four two-hour sessions in a workshop
setting. During these meetings, differences in cognitive and social
interaction were analyzed and many situations were role played. At the
completion of the pre-service training, the teachers were given broad
outlines to follow in their interactions. To insure consistency in
the approaches, the teachers met with the researcher one evening per
week. The researcher visited each study site at least once a week to
insure uniformity of teacher behavior. The teachers met with their
cognitive and social groups separately for 750 minutes each -- 25
periods of 30 minutes apiece. These daily interactions were randomized
as to the time of the school day. After six weeks of such treatment,
the eighty-two children were post-tested by means of the same instrument.

The subjects involved in the study, ranged in age from sixty-four
months to seventy-eight months. The three kindergartens these children
were attending were chosen because they represented different socio-
economic strata. The study was completed between May 27 and May 12, 1972.

Reinforcement, which was assumed to be vital in increasing motivation,
played a big role in the treatments. The cognitive group were reinforced
directly by the teacher for levels of learning achieved. The social group
gained social reinforcement inherent in their situation and indirectly
from the teacher.

Mean difference scores between pre- and post-test results on
Gumpookies for the three groups, were analyzed by the analysis of
variance and t-tests. These procedures yielded differences significant at the .05 level between the cognitive group and the control group as well as between the social group and the control group. However, there was no significant difference between the cognitive group and the social group. The groups were also analyzed on the basis of sex. The boys' motivational levels increased more in the social group where reinforcement was inherent in the activity; while the girls' ratings improved more in the cognitive group where reinforcement was given generously by the teachers.

Four conclusions were drawn from this study. First, motivation to achieve in school can be taught. Second, cognitively-oriented interaction and socially-oriented interaction are equally effective in regard to teaching motivation to achieve in school. Third, reinforcement (both direct and indirect) is an effective means of increasing motivation to achieve in school. Finally, the effects of reinforcement vary as a function of sex. Girls respond more readily to external reinforcement: boys to inherent reinforcement.

Table 1 - Sample Frames from Gumpgookies Test

<table>
<thead>
<tr>
<th>Frame 1</th>
<th>Frame 2</th>
<th>Frame 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>These Gumpgookies want to play ball well.</td>
<td>This one tries to hit the ball.</td>
<td>This Gumpgookie can point to the letter B.</td>
</tr>
<tr>
<td>This one will try later.</td>
<td>This Cumpgookie thinks all letters look the same.</td>
<td></td>
</tr>
</tbody>
</table>
TABLE 2
MEAN DIFFERENCE SCORES FOR THE THREE GROUPS

<table>
<thead>
<tr>
<th></th>
<th>Cognitive</th>
<th>Social</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys</td>
<td>5.79</td>
<td>6.24</td>
<td>2.92</td>
</tr>
<tr>
<td>Girls</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TABLE 3
MEAN DIFFERENCE SCORES FOR THE THREE GROUPS DIVIDED BY SEX

<table>
<thead>
<tr>
<th></th>
<th>Boys</th>
<th>Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive</td>
<td>5.21</td>
<td>6.33</td>
</tr>
<tr>
<td>Social</td>
<td>6.50</td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td></td>
<td>3.80</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Boys</th>
<th>Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1.44</td>
</tr>
</tbody>
</table>