Effects of value-of-success information on preschool children's task choice

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The purpose of this study was to investigate effects of information concerning the value of being successful in given tasks on 68 preschool children's (38 boys and 30 girls) choice of the tasks. Jigsaw puzzles with three levels of difficulty were used as the tasks for children to choose from. Half of the five-year old children were given the information concerning the value of success in each task difficulty level. Under the no-information condition, children tended to choose the easy puzzle, while those under the information condition tended to choose the more difficult one. It was concluded that value-of-success information changed children's choice from an easy to a more difficult task. Implications of the results were discussed.

Key words: preschool children, value-of-success information, task choice.

Many studies reported that preschool children tended to view their ability as being extremely high and to underestimate task difficulty (Dweck & Elliott, 1983). For example, Nicholls (1978) found that perception of own academic attainment was less closely related to attainment in preschool children than older children. Preschool children ranked themselves at or near the top of their class. Parsons and Ruble (1977) found that preschool children were certain of their success even in the face of repeated failure. These studies' results show that preschool children's success expectancy is high; they believe that they can solve even a task which seemed to be difficult for them objectively.

Since it was reported that how to behave was in proportion to the degree of success expectancy (Bandura, 1977), preschool children whose success expectancy is high are assumed to show challenging task choices. However, many studies of preschool children's task choices reported that they tended to choose an easy task. For example, Sears and Levin (1957) checked preschool children's task choices. As a result, preschool children chose an easy task more than a middle and a difficult tasks. Bialer (1961) found that an easy task choice declined with age. Nicholls (1980) revealed the reason of why preschool children tended to choose an easy task. He checked 5 and 7-year-olds' task choices and understanding the relationship between the task difficulty level and the success incentive value of the task (success in a more difficult task was of greater value). While 7-year-olds who understood it did not tend to choose an easy task, 5-year-olds who did not understand it tended to choose an easy task. From these results, he concluded as follows: preschool children did not yet understand that success in a more difficult task was of greater value. It was important for them whether they could success or not, in order to demonstrate high ability. Therefore, preschool children, whose attention was focused only on "success or not", inclined to choose an easy task in which the chance of success was the greatest.

By the way, Locke, Shaw, Saari, and Latham (1981) reviewed studies of task choice and task performance. They revealed in the paper that challenging task choice led to higher performance. It is a pity that preschool children, whose success expectancy is high, do not show challenging task choices because of their immature of understanding the success value. It might be meaningful to try to
change preschool children's task choices from an easy task to a more difficult task by informing them the success value.

This study examines the effects of the information that success in a more difficult task is of greater value on preschool children's task choices. Two conditions are conducted: One is the no-information condition in which the information of each task's success value is not given to the subjects, the other is the information condition in which the information of each task's success value is given to the subjects. The subjects' task choices in the information condition are compared with those in the no-information condition. In the information, points of success which increased according to the task difficulty level are adopted to indicate the value of success. The subject's success expectancy is also checked before task choice test in order to confirm if preschool children's success expectancy is high. The hypotheses are as follows: preschool children will choose an easy task in the no-information condition in spite of their high success expectancy. On the other hand, in the information condition, they will not choose an easy task but a more difficult task.

Method

Subjects

The subjects were 68 preschool children with a mean age of 62 months (56 to 68 months), 38 boys and 30 girls.

Task

Jigsaw puzzles with three difficulty levels were used. Three difficulty levels consisted of an easy, a middle and a difficult levels. All these puzzles depicted the same horse, but were different in the number of pieces. The easy, the middle and the difficult puzzles consisted of two, four and seven pieces respectively. To select these three difficulty puzzles, horse jigsaw puzzles with eight difficulty levels were given to a pilot sample of 46 preschool children (5-year-olds). In a pilot test, the puzzles with solution rate of 89 percent, 54 percent and 4 percent were considered an easy, a middle and a difficult tasks, respectively.

Procedure

The subjects were led in one of kindergarten's rooms by the experimenter and were tested individually. The procedure consisted of two tests: the success expectancy test and the task choice test. The task choice test was done soon after the success expectancy test was over.

Success expectancy test. The experimenter presented jigsaw puzzles with three difficulty levels to the subjects. A middle puzzle was always in the middle placement, but the left-right placement of an easy and a difficult puzzles was alternated. After the experimenter explained to the subject how to do puzzle with a sample puzzle of assembling 3 pieces into the shape of an apple, she asked the subject pointing to each puzzle randomly, "Do you think you can assemble these pieces into the shape of a horse? If you think so, place a yellow star chip in front of the puzzle." A little box containing five yellow-star chips was placed on the right in front of the subject. The subjects who placed star chips in front of all three puzzles were considered the high expectancy children. The subjects who placed star chips in front of an easy and a middle puzzles were considered the middle expectancy children. The subjects who did not place a star chip in front of any puzzles or placed it only in front of an easy one were considered the low expectancy children.

Task choice test.

(The no-information condition)

After the success expectancy test, the experimenter asked the subject, "You can play one of these puzzles. Which one would you like to do?" Then, the subject chose a puzzle to do. That puzzle's difficulty level was recorded.

(The information condition)

After the success expectancy test, the experimenter described the information of each
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Table 1

The number of the low, the middle, the high and the other success expectancy children

<table>
<thead>
<tr>
<th>Success expectancy</th>
<th>Expectancy pattern</th>
<th>Number of subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>E M D</td>
<td>11</td>
</tr>
<tr>
<td>Middle</td>
<td>+ + +</td>
<td>13</td>
</tr>
<tr>
<td>High</td>
<td>+ + +</td>
<td>38</td>
</tr>
<tr>
<td>Other</td>
<td>+ + +</td>
<td>4</td>
</tr>
<tr>
<td>+ + +</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>+ + +</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>+ + +</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

Table 2

The number of task choices in the no-information and the information conditions

<table>
<thead>
<tr>
<th>Condition (expectancy)</th>
<th>Task choice</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No-information</td>
<td>E M D</td>
<td>26</td>
</tr>
<tr>
<td>High</td>
<td>13 2 4</td>
<td>19</td>
</tr>
<tr>
<td>Middle</td>
<td>6 1 0</td>
<td>7</td>
</tr>
<tr>
<td>Information</td>
<td>8 1 16</td>
<td>25</td>
</tr>
<tr>
<td>High</td>
<td>7 0 12</td>
<td>19</td>
</tr>
<tr>
<td>Middle</td>
<td>1 1 4</td>
<td>6</td>
</tr>
</tbody>
</table>

Results

Seventy-five percent of the subjects showed the middle or the high expectancy, while only 16 percent of the subjects showed the low expectancy.

The middle and the high expectancy subjects’ task choices were analyzed, since it was hypothesized that the task choice of the subject whose success expectancy was not low would change for the more challenging by giving the information of the success value. Table 2 shows the number of the middle and the high expectancy subjects’ task choices in the no-information and the information conditions. The rate of an easy task choice in the information condition was compared with that in the no-information condition by chi-square test. As a result, there was a significant difference between these rates of an easy task choice ($\chi^2 = 8.63, df = 1, p < .005$). As shown in Table 2, many subjects (19/26) chose an easy task in the no-information condition. On the other hand, many subjects (17/25) chose a middle and a difficult tasks in the information condition.
Discussion

The rate of an easy task choice in the information condition was significantly less than that in the no-information condition. This finding reveals that the information of the success value had an effect on making preschool children engage in the challenging task choices. The success value of an easy, a middle and a difficult task might be the same for subjects who did not know that success in a more difficult task was of greater value in the no-information condition. Therefore, they might choose an easy task which required the least effort to succeed and get the same value, even though their success expectancy was high. On the other hand, the success value of an easy, a middle and a difficult task might be different for subjects in the information condition in which it was communicated that the success points increased with the task difficulty levels. Therefore, they might not hesitate to choose a middle or a difficult task to get the greater value because their success expectancy was high. That is, the information might change preschool children’s task choices from low to higher by changing their attention from “to get the same value” to “to get the greater value”. In daily life, children are praised, given a prize and so on by parents and teachers when they succeed in a more difficult task. Through much experience to be informed externally that success in a more difficult task is of greater value, children may obtain this sense of social value. High points of success in the middle and the difficult task seem to play the role corresponding to these praise, prize in daily life. After external reinforcement, children may adopt it as the internal criterion that control their behavior without the external reinforcement.

By the way, 16 percent of subjects showed the low expectancy in this experiment, in spite of the general view that preschool children’s expectancy was high. While this study discarded such a low expectancy subjects’ data in analyzing the results and discussing them, further study to consider the individual difference in the same stage of development may be needed to make more clear preschool children’s task choices.

References

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