

Sex Differences in Achievement Motivation, Social  
Comparison, and Self-Reward in Children

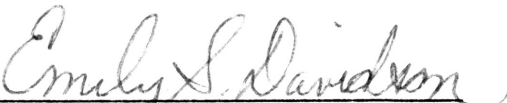
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Submitted in Partial Fulfillment of the Requirements of the  
University Undergraduate Fellows Program

1983-1984

Approved by:

  
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April 1984

## ABSTRACT

The present study examined the social comparison and self-reward patterns of seventy-three fifth grade male and female children. Motivation was assessed using the Intrinsic Versus Extrinsic Orientation scale and perceived competence was assessed using the Perceived Competence Scale for Children. Subjects performed on a pursuit rotor apparatus and received manipulated feedback after observing a model of either superior or equal ability perform the task. Subjects also observed the model self-reward prior to rewarding their own scores. Motivation was significantly correlated with perceived competence of cognitive skills for males, but not for females. There was a significant sex difference observed: females chose lower standards of self-reward, consistently rewarded lower scores, and rewarded a greater number of trials than male subjects. There was no significant effect for level of achievement motivation, modeled ability, or perceived competence of physical skills. There was a marginally significant interaction between perceived competence and modeled ability: low perceived competence subjects lowered their scores more when observing an equal ability model than when viewing a model of superior ability.

To Emily

Teacher, advisor, friend

## ACKNOWLEDGEMENTS

I would like to thank the parents and children of Navasota Intermediate School, Navasota, Texas, for their participation in the study. I would also like to thank the principal, Mr. H. Hood, and the teachers - Mrs. Bryan, Mrs. Curry, Mrs. Harris, Mrs. Martin, and Mrs. Michaels - for their assistance and cooperation. Without their help, the study would not have been possible.

I would also like to thank Dr. C. Stoup, who assisted me in using the computer to perform the statistical analysis of my data. This was an enormous help.



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Research on imitation and self-reward has revealed that in achievement situations, children use their observations of others' performance and self-reward standards to set their own standards (Bandura, 1977). It is hypothesized that children use social comparison to set standards based on relative ability. Their standards will be lower than a model of superior ability, similar to a model of equal ability, and higher than a model of inferior ability.

Some studies have demonstrated that while relative ability does influence self-reward standards, children consistently set standards lower than models of equal ability. Some researchers feel that children tend to adopt a self-aggrandizing rule. But in these studies, all of the models were adults, who may be seen as more able than children. So even though their actual performances are the same, children will use a lower standard than an adult model. A study by Davidson and Smith (1982) used peers, rather than adults, as models of equal ability. The results supported the relative ability hypothesis, and did not show a leniency effect.

In a recent study on self-reward in children using peer models, McDonnaugh and Davidson (note 1) found sex differences. When viewing an equal ability model, male subjects adopted a standard nearly identical to the model's, while female subjects adopted a standard lower

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<sup>1</sup>This manuscript is in accordance with the regulations set forth in the Publication Manual of the American Psychological Association.

than the model's. When viewing a superior ability model, however, female subjects failed to lower their standards as much as males did. A possible explanation for this is that these differences may be related to achievement motivation.

Low achievement subjects appear to have trouble making accurate relative ability judgments. They usually lower their standards when comparing themselves to models of equal ability and match the standard of a superior ability model. It is possible that they are surprised when their performance is as high as the model's, and attribute it to luck or coincidence, rather than to their ability. Hence, they lower their standard. When comparing themselves to superior ability models, however, their expectation of performing worse than the model is confirmed, and they attribute their performance to their ability. They match the standard even though this results in fewer rewards, because this is what they normally experience. High achievement subjects, on the other hand, seem to make accurate relative ability judgments. They match the standard of an equal ability model, and lower their standard when observing a model of superior ability.

The research on achievement motivation has revealed distinct sex differences which exist in childhood and which increase with age (Stein and Bailey, 1973). Females generally show achievement levels

that are considerably lower than males. Lenny, Gold, and Browning (1983) suggest that females tend to approach achievement situations with a consistently lower level of self-confidence than males. It may be that females in the study by McDonnaugh and Davidson (note 1) performed as they did because they had a lower level of achievement motivation than the male subjects did.

Pomerantz and Schultz (1975), however, feel that males and females both acquire achievement needs, but that these needs are expressed differently because of socialization processes. This is supported by the work of Harter (1981, 1982). She found no sex differences when measuring intrinsic versus extrinsic orientation in classroom learning in children. She also found no differences by sex on cognitive and social subscales of a self-report scale of perceived competence for children. It may be that sex differences are specific to certain tasks.

In the study by McDonnaugh and Davidson (note 1), the task was defined as a measure of physical skill. The sex differences may have been due to the subjects' evaluations of their physical skills. Harter (1981) found that female children rated their physical skills significantly lower than male children did on the physical subscale of a self-report scale of perceived competence. The females may have

viewed the task as masculine-oriented, and therefore not an appropriate achievement-related task. If they had a low evaluation of their physical skills, they may also have had less confidence in their ability to do well on the task. The sex differences may have been the result of an interaction between the subject's evaluation of his or her own ability and the way in which the task was viewed, as either masculine-, or feminine-oriented.

The purpose of the study was to combine modeled performance and self-reward with an achievement task which was defined as a measure of physical ability. And if sex differences occurred, to examine whether these differences could be attributed to achievement motivation, to perceived competence of physical skills, or to an interaction between the two.

## METHOD

### Subjects

The subjects were eighty-two fifth graders who ranged from nine to twelve years of age (mean age 10.6). All subjects received parental permission to participate in the study, and they were largely of lower and middle socioeconomic status. Of these eighty-two, nine were excluded from the analysis: four transferred from the school

before they could complete the study, one showed a strong position bias on the questionnaires, and four refused to complete the study. Of the remaining seventy-three subjects, thirty were male and forty-three were female.

### Questionnaires

The Intrinsic Versus Extrinsic Orientation in the Classroom self-report scale developed by Harter (1982) was used to assess achievement motivation (see Appendix A). The scale measures a child's preference on five dimensions of classroom learning that are characterized as having both an intrinsic and extrinsic pole. The dimensions are: 1) preference for challenge versus preference for easy work; 2) work for curiosity and interest versus work for teacher approval; 3) independent mastery attempts versus dependence on the teacher; 4) independent judgment versus reliance on the teacher's judgment; and 5) internal versus external criteria for success or failure. The items are scored on a scale of one to four. A one indicates maximum extrinsic orientation, and a four indicates maximum intrinsic orientation. The scores for items in each subscale were averaged to give individual indices for each dimension.

Three of the subscales, challenge, curiosity, and mastery, are related to motivation in that they assess what the child prefers and



likes to do. The judgment and criteria subscales assess more informational structures about the rules of school. Because of this, the scores on the challenge, curiosity, and mastery subscales were averaged to give a single measure of each child's level of motivation. The scores for all subjects were then split at the median to form two groups of subjects: intrinsic, or high motivation subjects; and extrinsic, or low motivation subjects.

The Perceived Competence Scale for Children, which was also developed by Harter (1981), was used to provide a profile of each child's perceived competence across three skill domains (see Appendix B). The domains are cognitive skills, social skills, and physical skills. It also yields a measure of the child's general feelings of self-worth. Each item was scored using a scale of one to four, with a one indicating lowest perceived competence, and a four indicating highest perceived competence.

Both the Perceived Competence Scale and the Intrinsic Versus Extrinsic Orientation Scale utilize the same format. The format was designed to minimize the tendency for children to give socially desirable responses when presented with the two-choice true-false format. In these scales, the child is first asked to decide which child is most like him; and then whether this is really true for him, or only sort of true for him. The implication that half of all children view

themselves in one way, while the other half view themselves in an opposite way, legitimizes either choice. Apparatus and Task

The task for both models and subjects employed a pursuit rotor apparatus (see Figure 1). The machine was ostensibly connected to a computer in the next room which would calculate their scores. The "computer" was connected to a scorebox with a lighted digital display where the subjects received their scores. The scorebox was also equipped with a device which would emit a tone to signal the beginning and end of each trial. The subject's task was to keep a pointer on the white square as it traveled inside the circular tract at forty-five rpm. The trials lasted fifteen seconds, and five seconds later the score was presented on the scorebox.

Model performance and self-reward were recorded on videotape, and were presented on an eleven-inch black and white television monitor, using a Panasonic videocassette recorder.

#### Score Schedule

The schedule of scores was developed by Davidson and Smith (1982) (see Table 1). In order to have sufficient overlap between subject and model performance, there must be considerable variance in the performance of either the model or subject, or both, in conditions where ability is supposed to be different. Since high variance

interferes with ability judgments, the variance has been patterned over time. Both the subject and model improve their performance over time, which is also consistent with an expected increase in ability with practice. In addition, there is sufficient overlap between subject and model performance. The overlapping scores are underlined and will be presented in the self-reward phase.

### Design

The experiment was an eight-cell design, with the subjects divided by sex and by level of achievement motivation (see Figure 2). Subjects with an average of 3.1 or above on the challenge, curiosity, and mastery subscales were designated high motivation, and those with scores below 3.1 were designated low motivation. Half of the subjects in each group saw a model of superior ability, while the other half saw an equal ability model. All subjects saw same-sex models.

### Procedure

The subjects were divided into two approximately equal groups and taken to two different rooms in the school. There they were given the Perceived Competence Scale for Children first, and then the Intrinsic Versus Extrinsic Orientation Scale. The scales were collected, and the children were returned to their classrooms.

For the performance and self-reward phases of the experiment, each child was taken to a two-room trailer parked on the school grounds. The wall between the two rooms contained a one-way mirror. The pursuit rotor, television, and scorebox were on a table in one room, and the control for the scorebox (and ostensibly the computer) were in the other room, behind the one-way mirror (see Figure 3).

The child was told that the experimenter was interested in how children develop certain physical skills, and that the experimenter was especially interested in eye-hand coordination. Eye-hand coordination was explained as the ability to do things like touch a moving object while looking at it. The child was shown the pursuit rotor and told that it would measure their level of eye-hand coordination.

The pursuit rotor was chosen because few children are familiar with it, and thus have no preconceived notions about their ability. In addition, it is difficult for the child to tell how well he or she is doing, so the manipulated scores are believable.

The child was given four fifteen-second practice trials, and told that he or she would watch someone else try it. First the child in the film would try it and receive his or her score, and then the subject would try it and receive his or her score. The experimenter

entered the other room on the pretext of setting up the computer, and manipulated the scores. There were fifteen trials in all.

The experimenter returned when the fifteen trials were completed and asked the child to rate the model's performance as either better than, the same as, or worse than his own performance. The experimenter then explained that the model could take tokens for scores that the model felt were good scores for him, that he could trade the tokens in for a prize, and that the more tokens he had, the better his prize would be. The child saw the rest of the film and watched the model reviewing some of his scores (the overlapping, or underlined scores). The model made comments such as, "That's not a very good score for me, I don't deserve a token for that one". Or, "Now that's a good score for me, I'll take a token". All models rewarded scores greater than or equal to thirty.

The child was then told that it was his turn to take tokens for the scores he thought were good scores for him. He could trade the tokens in for a prize when he was through, and the more tokens he had, the better his prize would be. The experimenter again went into the other room on the pretext of setting the computer, and presented the subject's scores on the scoreboard again. The experimenter observed the child through the one-way mirror and recorded the number of tokens taken, and the scores rewarded.

The experimenter returned and counted the tokens. She explained that the child could perform additional trials if he liked in order to earn more tokens. She asked the child how many trials he would like to try. After five trials, the child was told that they had run out of time, and his tokens were again counted. He was told that he had plenty of tokens and could choose whichever prize he liked. After choosing a prize, the child was returned to the classroom.

The dependent measures were: the number of trials rewarded; the number of tokens taken; the lowest score rewarded; the lowest score consistently rewarded; and the number of trials selected to perform, or level of aspiration.

## RESULTS

As predicted, there was a significant difference between males and females on the physical subscale of the perceived competence scale,  $t(71) = 2.6869$ ,  $p < .05$ . Females rated their physical skills ( $\bar{X}=2.8156$ ) lower than males did ( $\bar{X}=3.2238$ ). There were no significant differences on any of the other subscales on the Perceived Competence scale. There were no significant differences on the subscales of the Intrinsic Versus Extrinsic Orientation scale; nor was there a significant difference in the average of the challenge, curiosity, and mastery subscales, or level of motivation.

There was a significant sex difference when correlating motivation (average of scores on the challenge, curiosity, and mastery subscales on the Intrinsic Versus Extrinsic Orientation scale) with scores on the cognitive subscale of the Perceived Competence scale. Motivation and cognitive perceived competence were significantly correlated for males ( $r = .5835$ ),  $t(28) = 3.8019$ ,  $p < .05$ . But there was no significant correlation between the two for females ( $r = -.1112$ ). This is consistent with the past research which indicates that while bright females may accurately rate their cognitive skills highly, this does not lead to a corresponding high level of achievement motivation. Both males and females varied in their levels of motivation, but motivation in females does not appear to be related to the same things that are related to motivation in males. This supports the view that motivation in females needs to be studied separately from motivation in males (Stein and Bailey, 1973).

In analyzing the dependent measures, all but one child took only one token per rewarded trial. Since the number of tokens taken and number of trials rewarded were the same, the number of tokens taken was not included in the analysis.

Each of the dependent measures was analyzed using a 2 (sex of subject) x 2 (level of motivation) x 2 (ability of model) between subjects unequal N analysis of variance. Analyzing the lowest score

rewarded revealed a main effect for sex,  $F(1,65) = 4.57, p < .0363$ . Females chose significantly lower standards of self-reward ( $\bar{X} = 24.7$ ) than males ( $\bar{X} = 26.7$ ). Females also consistently rewarded a lower score ( $\bar{X} = 25.1$ ) than males did ( $\bar{X} = 28.5$ ),  $F(1,65) = 14.31, p < .0003$ ; and rewarded a greater number of trials ( $\bar{X} = 10.0$ ) than male subjects did ( $\bar{X} = 9.1$ ),  $F(1,65) = 4.35, p < .0410$ . There were no main effects for level of motivation or for modeled ability, and there were no interaction effects on any of the dependent measures. There were no significant differences in level of aspiration between any of the conditions.

Subjects with different levels of achievement motivation did not differ on any of the dependent measures. They were not influenced by their level of motivation. This is most likely because motivation was based entirely on classroom tasks, and the pursuit rotor is clearly not related to classroom activity. The sex differences could not, therefore, be attributed to differences in achievement motivation.

To test the hypothesis that perceived competence of physical skills would influence self-reward, the subjects were divided into groups on the basis of their level of perceived competence. Because the males and females differed significantly on this subscale, the scores were split at the median separately for each sex. Males with



scores of 3.5 or above were designated high perceived competence, and those with scores below 3.5 were designated low perceived competence. Females with scores of 2.8 or above were designated high perceived competence, and those with scores below 2.8 were designated low perceived competence.

The data were then analyzed using a 2 (sex of subject) x 2 (level of perceived competence) x 2 (ability of model) between subjects unequal N analysis of variance. Besides a significant main effect for sex ( $F(1,65) = 3.67, p < .05$ ), there was a marginally significant interaction effect between perceived competence and modeled ability,  $F(1,65) = 3.04, p < .0860$ . While high perceived competence subjects lowered their standards more when viewing a superior ability model than when viewing an equal ability model, low perceived competence subjects chose a higher self-reward standard when observing a superior ability model than when observing a model of equal ability (see Table 2). This is the same pattern obtained for females in the study by McDonnaugh and Davidson (note 1). Self-reward standards do appear to be somewhat related to a subject's perceived competence of his own ability, and his assessment of the model's ability.

A final analysis was done using a 2 (sex of subject) x 2 (ability of model) between subjects unequal N analysis of variance. The only significant effect was a main effect for sex on: lowest score

rewarded,  $F(1,69) = 4.87$ ,  $p < .0306$ ; lowest score consistently rewarded,  $F(1,69) = 14.88$ ,  $p < .0003$ ; and number of trials rewarded,  $F(1,69) = 4.59$ ,  $p < .0358$ . There was no main effect for modeled ability, no interaction effect, and again no difference between any of the conditions in level of aspiration.

#### DISCUSSION

The results of this study indicate there are definite differences in achievement motivation in males and females. Although the levels of motivation are not significantly different for males and females, there are differences in how this motivation is acquired. The fact that motivation was related to perceived competence of cognitive skills for males, but not for females, demonstrates the need for motivation to be studied separately for each sex. Only then can the factors which influence achievement motivation for both males and females be accurately determined.

Achievement motivation did not have a significant effect on social comparison and self-reward for either males or females in the study. Since motivation in classroom learning was unrelated to self-reward on the pursuit rotor task, this supports the hypothesis that achievement motivation is situation specific, and not a generalized motive which operates in all achievement settings.

What did influence self-reward was perceived competence of physical skills. Although there was not a significant main effect for perceived competence, there was a marginally significant interaction effect between perceived competence and modeled ability. Low perceived competence subjects lowered their scores more when comparing themselves to an equal ability model than when comparing themselves to a model of superior ability. This suggests that social comparison and relative ability judgments are subject to the subject's perceived competence of his own skills, and his evaluation of the model's abilities.

There are several possible reasons why there was not a significant effect for modeled ability. First, relative ability judgments are more accurate when the model's performance is also a function of age. Since the models were age peers, some subjects may have failed to discriminate between the age of the model and the model's performance. A second reason concerns the lowest score rewarded by the model. In the previous studies using the same schedule of scores (Davidson and Smith, 1982; McDonnaugh and Davidson, note 1), models rewarded all scores equal to and above thirty-five, while in the present study models rewarded all scores equal to and above thirty. Since the next lowest score is twenty-five (see Table 1), this may have prevented subjects from lowering their standard when viewing a superior ability model because it represented too large a drop.

It is clear from this study that there are sex differences in social comparison and self-reward using the pursuit rotor apparatus. It is also true that modeled ability and perceived competence of physical skills interact to influence social comparison and self-reward when the task is defined as a measure of physical ability, although neither has a significant effect by itself. Additional study, perhaps using a modeled standard of thirty-five rather than thirty, may clarify the roles of sex, modeled ability, and perceived competence as they influence social comparison and self-reward. It may also help to identify other factors which may have an effect as well.

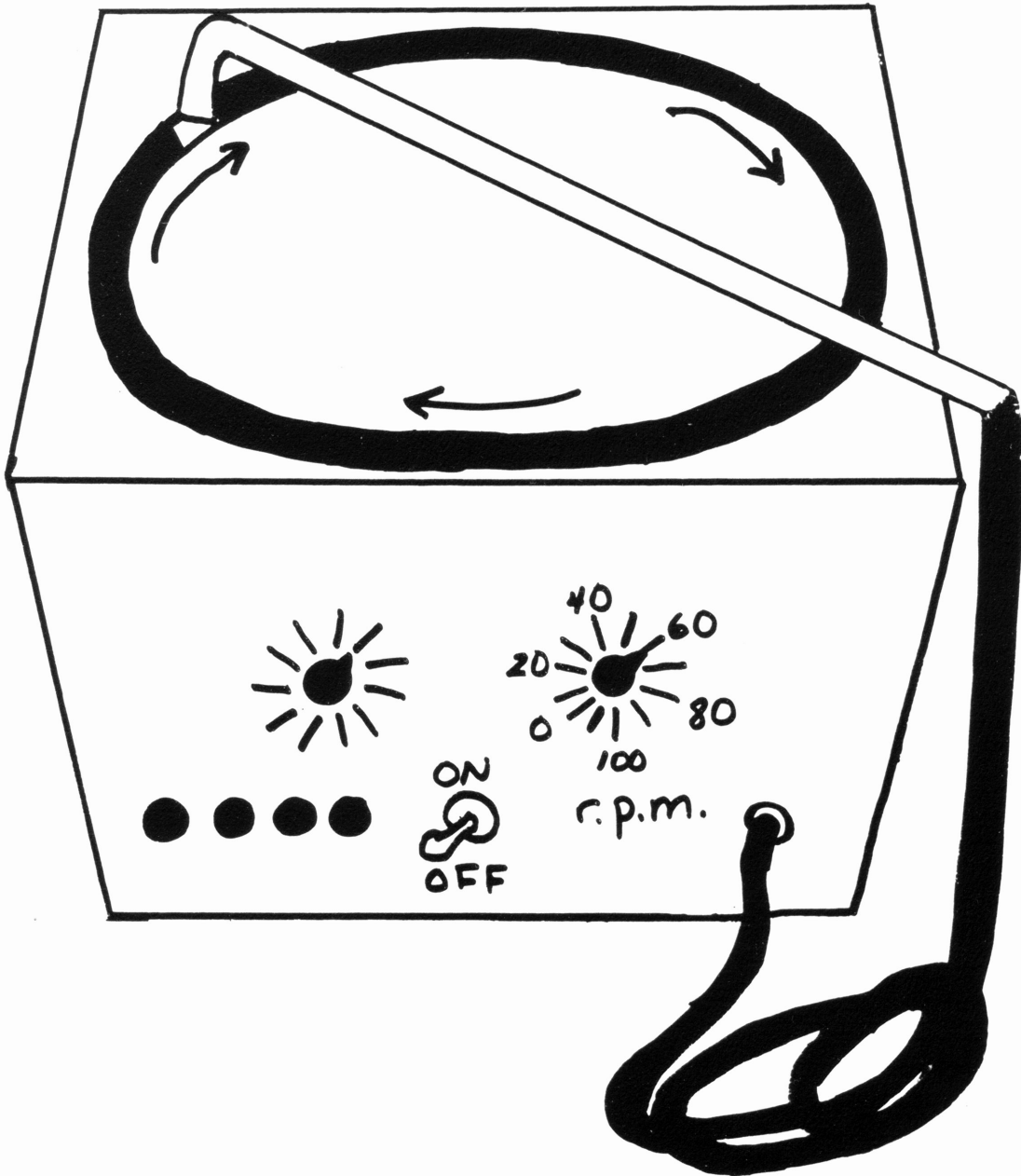


FIGURE 1

PURSUIT ROTOR APPARATUS

TABLE 1  
 SCORES PRESENTED TO MODELS AND SUBJECTS

| Model      | Rotor Task Trials |           |           |           |           |           |           |           |           |           |           |           |    |    |    |
|------------|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----|----|----|
| Superior.. | <u>22</u>         | <u>23</u> | <u>25</u> | <u>24</u> | <u>30</u> | <u>35</u> | <u>34</u> | <u>35</u> | <u>36</u> | 38        | 40        | 45        | 43 | 47 | 50 |
| Equal..... | 18                | 19        | 20        | <u>22</u> | <u>23</u> | <u>25</u> | <u>24</u> | <u>30</u> | <u>35</u> | <u>34</u> | <u>35</u> | <u>36</u> | 39 | 40 | 43 |
| Subject... | 18                | 20        | 19        | <u>23</u> | <u>22</u> | <u>24</u> | <u>25</u> | <u>30</u> | <u>34</u> | <u>35</u> | <u>36</u> | <u>35</u> | 40 | 39 | 43 |

Note: Underlined scores will be presented in model self-reward phase

FIGURE 2  
DESIGN OF EXPERIMENT

| Subject's<br>Level of<br>Achievement | Model's Level of Ability |                  |                     |                  |
|--------------------------------------|--------------------------|------------------|---------------------|------------------|
|                                      | Male                     |                  | Female              |                  |
| High<br>Achievement                  | Superior<br>Ability      | Equal<br>Ability | Superior<br>Ability | Equal<br>Ability |
| Low<br>Achievement                   | Superior<br>Ability      | Equal<br>Ability | Superior<br>Ability | Equal<br>Ability |

FIGURE 3  
FLOOR PLAN OF TWO-ROOM RESEARCH TRAILER

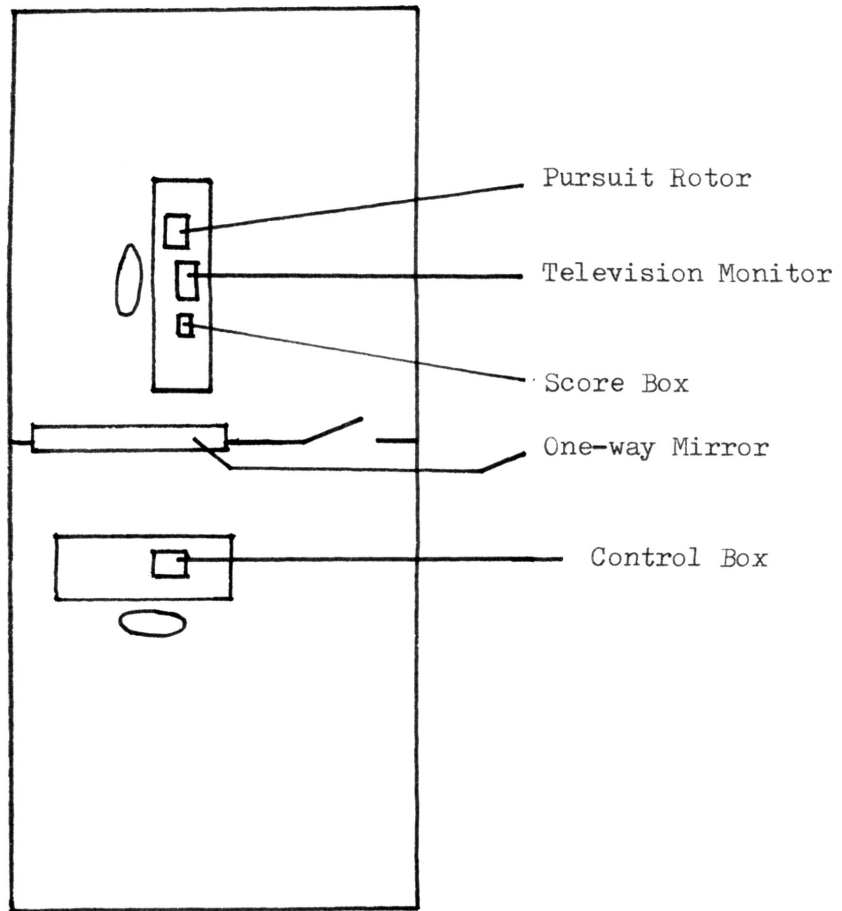




TABLE 2

LOWEST SCORE SELF-REWARDED, BY MODEL ABILITY AND  
SUBJECT'S PERCEIVED COMPETENCE OF PHYSICAL SKILLS

|                                |        | Modeled Ability |         |
|--------------------------------|--------|-----------------|---------|
|                                |        | Superior        | Equal   |
| Subject's Perceived Competence |        |                 |         |
| High                           | X..... | 24.1875         | 25.6522 |
| Low                            | X..... | 26.6818         | 25.1667 |

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APPENDIX A

## In the Classroom

### Pupil's Form

Name \_\_\_\_\_ Age \_\_\_\_\_ Birthday (Month) \_\_\_\_\_ (Day) \_\_\_\_\_

Grade \_\_\_\_\_ Teacher \_\_\_\_\_

Boy or Girl (circle which)

#### Sample Questions

|     | Really<br>True<br>for Me | Sort of<br>True<br>for Me |  | Sort of<br>True<br>for Me | Really<br>True<br>for Me  |                          |                          |
|-----|--------------------------|---------------------------|--|---------------------------|---|--------------------------|--------------------------|
| (a) | <input type="checkbox"/> | <input type="checkbox"/>  | Some kids would rather play outdoors in their spare time   | <b>BUT</b>                | Other kids would rather watch T.V.  | <input type="checkbox"/> | <input type="checkbox"/> |
| (b) | <input type="checkbox"/> | <input type="checkbox"/>  | Some kids like hamburgers better than hot dogs   | <b>BUT</b>                | Other kids like hot dogs better than hamburgers.  | <input type="checkbox"/> | <input type="checkbox"/> |
|     |                          |                           |  |                           |   |                          |                          |
| 1.  | <input type="checkbox"/> | <input type="checkbox"/>  | Some kids like hard work because its a challenge   | <b>BUT</b>                | Other kids prefer easy work that they are sure they can do                                    | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.  | <input type="checkbox"/> | <input type="checkbox"/>  | When some kids don't understand something right away they want the teacher to tell them the answer | <b>BUT</b>                | Other kids would rather try and figure it out by themselves                                   | <input type="checkbox"/> | <input type="checkbox"/> |
| 3.  | <input type="checkbox"/> | <input type="checkbox"/>  | Some kids work on problems to learn how to solve them  | <b>BUT</b>                | Other kids work on problems because you're supposed to  | <input type="checkbox"/> | <input type="checkbox"/> |
| 4.  | <input type="checkbox"/> | <input type="checkbox"/>  | Some kids almost always think that what the teacher says is O.K.                                   | <b>BUT</b>                | Other kids sometimes think their own ideas are better   | <input type="checkbox"/> | <input type="checkbox"/> |
| 5.  | <input type="checkbox"/> | <input type="checkbox"/>  | Some kids know when they've made mistakes without checking with the teacher                        | <b>BUT</b>                | Other kids need to check with the teacher to know if they've made a mistake                   | <input type="checkbox"/> | <input type="checkbox"/> |
| 6.  | <input type="checkbox"/> | <input type="checkbox"/>  | Some kids like difficult problems because they enjoy trying to figure them out                     | <b>BUT</b>                | Other kids don't like to figure out difficult problems  | <input type="checkbox"/> | <input type="checkbox"/> |
| 7.  | <input type="checkbox"/> | <input type="checkbox"/>  | Some kids do their school-work because the teacher tells them to                                   | <b>BUT</b>                | Other kids do their school-work to find out about alot of things they've been wanting to know | <input type="checkbox"/> | <input type="checkbox"/> |

|     | Really True for Me       | Sort of True for Me      |  |            | Sort of True for Me  | Really True for Me       |                          |
|-----|--------------------------|--------------------------|--|------------|--|--------------------------|--------------------------|
| 8.  | <input type="checkbox"/> | <input type="checkbox"/> | When some kids make a mistake they would rather figure out the right answer by themselves                      | <b>BUT</b> | Other kids would rather ask the teacher how to get the right answer                      | <input type="checkbox"/> | <input type="checkbox"/> |
| 9.  | <input type="checkbox"/> | <input type="checkbox"/> | Some kids know whether or not they're doing well in school without grades                                      | <b>BUT</b> | Other kids need to have grades to know how well they are doing in school                 | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. | <input type="checkbox"/> | <input type="checkbox"/> | Some kids agree with the teacher because they think the teacher is right about most things                     | <b>BUT</b> | Other kids don't agree with the teacher sometimes and stick to their own opinion         | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. | <input type="checkbox"/> | <input type="checkbox"/> | Some kids would rather just learn what they have to in school  | <b>BUT</b> | Other kids would rather learn about as much as they can                                  | <input type="checkbox"/> | <input type="checkbox"/> |
| 12. | <input type="checkbox"/> | <input type="checkbox"/> | Some kids like to learn things on their own that interest them   | <b>BUT</b> | Other kids think its better to do things that the teacher thinks they should be learning | <input type="checkbox"/> | <input type="checkbox"/> |
| 13. | <input type="checkbox"/> | <input type="checkbox"/> | Some kids read things because they are interested in the subject   | <b>BUT</b> | Other kids read things because the teacher wants them to                                 | <input type="checkbox"/> | <input type="checkbox"/> |
| 14. | <input type="checkbox"/> | <input type="checkbox"/> | Some kids need to get their report cards to tell how they are doing in school                                  | <b>BUT</b> | Other kids know for themselves how they are doing even before they get their report card | <input type="checkbox"/> | <input type="checkbox"/> |
| 15. | <input type="checkbox"/> | <input type="checkbox"/> | If some kids get stuck on a problem they ask the teacher for help  | <b>BUT</b> | Other kids keep trying to figure out the problem on their own                            | <input type="checkbox"/> | <input type="checkbox"/> |
| 16. | <input type="checkbox"/> | <input type="checkbox"/> | Some kids like to go on to new work that's at a more difficult level   | <b>BUT</b> | Other kids would rather stick to the assignments which are pretty easy to do             | <input type="checkbox"/> | <input type="checkbox"/> |
| 17. | <input type="checkbox"/> | <input type="checkbox"/> | Some kids think that what the teacher thinks of their work is the most important thing                         | <b>BUT</b> | For other kids what <i>they</i> think of their work is the most important thing          | <input type="checkbox"/> | <input type="checkbox"/> |
| 18. | <input type="checkbox"/> | <input type="checkbox"/> | Some kids ask questions in class because they want to learn new things   | <b>BUT</b> | Other kids ask questions because they want the teacher to notice them                    | <input type="checkbox"/> | <input type="checkbox"/> |
| 19. | <input type="checkbox"/> | <input type="checkbox"/> | Some kids aren't really sure if they've done well on a test until they get their papers back with a mark on it | <b>BUT</b> | Other kids pretty much know how well they did even before they get their paper back      | <input type="checkbox"/> | <input type="checkbox"/> |

|     | Really True for Me       | Sort of True for Me      |  |            | Sort of True for Me  | Really True for Me       |                          |
|-----|--------------------------|--------------------------|--|------------|--|--------------------------|--------------------------|
| 20. | <input type="checkbox"/> | <input type="checkbox"/> | Some kids like the teacher to help them plan what to do next                           | <b>BUT</b> | Other kids like to make their own plans for what to do next  | <input type="checkbox"/> | <input type="checkbox"/> |
| 21. | <input type="checkbox"/> | <input type="checkbox"/> | Some kids think they should have a say in what work they do in school                  | <b>BUT</b> | Other kids think that the teacher should decide what work they should do                                 | <input type="checkbox"/> | <input type="checkbox"/> |
| 22. | <input type="checkbox"/> | <input type="checkbox"/> | Some kids like school subjects where its pretty easy to just learn the answers         | <b>BUT</b> | Other kids like those school subjects that make them think pretty hard and figure things out             | <input type="checkbox"/> | <input type="checkbox"/> |
| 23. | <input type="checkbox"/> | <input type="checkbox"/> | Some kids aren't sure if their work is really good or not until the teacher tells them | <b>BUT</b> | Other kids know if its good or not before the teacher tells them   | <input type="checkbox"/> | <input type="checkbox"/> |
| 24. | <input type="checkbox"/> | <input type="checkbox"/> | Some kids like to try to figure out how to do school assignments on their own          | <b>BUT</b> | Other kids would rather ask the teacher how it should be done  | <input type="checkbox"/> | <input type="checkbox"/> |
| 25. | <input type="checkbox"/> | <input type="checkbox"/> | Some kids do extra projects so they can get better grades                              | <b>BUT</b> | Other kids do extra projects because they learn about things that interest them                          | <input type="checkbox"/> | <input type="checkbox"/> |
| 26. | <input type="checkbox"/> | <input type="checkbox"/> | Some kids think its best if they decide when to work on each school subject            | <b>BUT</b> | Other kids think that the teacher is the best one to decide when to work on things                       | <input type="checkbox"/> | <input type="checkbox"/> |
| 27. | <input type="checkbox"/> | <input type="checkbox"/> | Some kids know they didn't do their best on an assignment when they turn it in         | <b>BUT</b> | Other kids have to wait til the teacher grades it to know that they didn't do as well as they could have | <input type="checkbox"/> | <input type="checkbox"/> |
| 28. | <input type="checkbox"/> | <input type="checkbox"/> | Some kids don't like difficult schoolwork because they have to work too hard           | <b>BUT</b> | Other kids like difficult schoolwork because they find it more interesting                               | <input type="checkbox"/> | <input type="checkbox"/> |
| 29. | <input type="checkbox"/> | <input type="checkbox"/> | Some kids like to do their schoolwork without help                                     | <b>BUT</b> | Other kids like to have the teacher help them do their schoolwork  | <input type="checkbox"/> | <input type="checkbox"/> |
| 30. | <input type="checkbox"/> | <input type="checkbox"/> | Some kids work really hard to get good grades  | <b>BUT</b> | Other kids work hard because they really like to learn things  | <input type="checkbox"/> | <input type="checkbox"/> |

APPENDIX B

## What I Am Like

NAME \_\_\_\_\_ BOY OR GIRL \_\_\_\_\_ AGE \_\_\_\_\_ BIRTHDAY \_\_\_\_\_ CLASS OR GROUP \_\_\_\_\_  
 (circle which)

### SAMPLE SENTENCES

| REALLY<br>TRUE<br>for me    | SORT OF<br>TRUE<br>for me |  | BUT |  | SORT OF<br>TRUE<br>for me | REALLY<br>TRUE<br>for me |
|-----------------------------|---------------------------|--|-----|--|---------------------------|--------------------------|
| a. <input type="checkbox"/> | <input type="checkbox"/>  | Some kids would rather play outdoors in their spare time   |     | Other kids would rather watch T.V.   | <input type="checkbox"/>  | <input type="checkbox"/> |
| b. <input type="checkbox"/> | <input type="checkbox"/>  | Some kids never worry about anything   |     | Other kids sometimes worry about certain things.                             | <input type="checkbox"/>  | <input type="checkbox"/> |
| 1. <input type="checkbox"/> | <input type="checkbox"/>  | Some kids feel that they are very good at their school work  |     | Other kids worry about whether they can do the school work assigned to them. | <input type="checkbox"/>  | <input type="checkbox"/> |
| 2. <input type="checkbox"/> | <input type="checkbox"/>  | Some kids find it hard to make friends   |     | For other kids it's pretty easy.   | <input type="checkbox"/>  | <input type="checkbox"/> |
| 3. <input type="checkbox"/> | <input type="checkbox"/>  | Some kids do very well at all kinds of sports  |     | Others don't feel that they are very good when it comes to sports.           | <input type="checkbox"/>  | <input type="checkbox"/> |
| 4. <input type="checkbox"/> | <input type="checkbox"/>  | Some kids feel that there are alot of things about themselves that they would change if they could |     | Other kids would like to stay pretty much the same.                          | <input type="checkbox"/>  | <input type="checkbox"/> |
| 5. <input type="checkbox"/> | <input type="checkbox"/>  | Some kids feel like they are just as smart as other kids their age                                 |     | Other kids aren't so sure and wonder if they are as smart.                   | <input type="checkbox"/>  | <input type="checkbox"/> |
| 6. <input type="checkbox"/> | <input type="checkbox"/>  | Some kids have alot of friends   |     | Other kids don't have very many friends.                                     | <input type="checkbox"/>  | <input type="checkbox"/> |



| REALLY<br>TRUE<br>for me     | SORT OF<br>TRUE<br>for me |   | BUT |   | SORT OF<br>TRUE<br>for me | REALLY<br>TRUE<br>for me |
|------------------------------|---------------------------|---|-----|---|---------------------------|--------------------------|
| 7. <input type="checkbox"/>  | <input type="checkbox"/>  | Some kids wish they could be alot better at sports  |     | Other kids feel they are good enough.   | <input type="checkbox"/>  | <input type="checkbox"/> |
| 8. <input type="checkbox"/>  | <input type="checkbox"/>  | Some kids are pretty sure of themselves   |     | Other kids are not very sure of themselves.   | <input type="checkbox"/>  | <input type="checkbox"/> |
| 9. <input type="checkbox"/>  | <input type="checkbox"/>  | Some kids are pretty slow in finishing their school work  |     | Other kids can do their school work quickly.  | <input type="checkbox"/>  | <input type="checkbox"/> |
| 10. <input type="checkbox"/> | <input type="checkbox"/>  | Some kids don't think they are a very important member of their class                               |     | Other kids think they are pretty important to their classmates.                         | <input type="checkbox"/>  | <input type="checkbox"/> |
| 11. <input type="checkbox"/> | <input type="checkbox"/>  | Some kids think they could do well at just about any new outdoor activity they haven't tried before |     | Other kids are afraid they might not do well at outdoor things they haven't ever tried. | <input type="checkbox"/>  | <input type="checkbox"/> |
| 12. <input type="checkbox"/> | <input type="checkbox"/>  | Some kids feel good about the way they act  |     | Other kids wish they acted differently.   | <input type="checkbox"/>  | <input type="checkbox"/> |
| 13. <input type="checkbox"/> | <input type="checkbox"/>  | Some kids often forget what they learn  |     | Other kids can remember things easily.  | <input type="checkbox"/>  | <input type="checkbox"/> |
| 14. <input type="checkbox"/> | <input type="checkbox"/>  | Some kids are always doing things with alot of kids   |     | Other kids usually do things by themselves.   | <input type="checkbox"/>  | <input type="checkbox"/> |
| 15. <input type="checkbox"/> | <input type="checkbox"/>  | Some kids feel that they are better than others their age at sports                                 |     | Other kids don't feel they can play as well.  | <input type="checkbox"/>  | <input type="checkbox"/> |
| 16. <input type="checkbox"/> | <input type="checkbox"/>  | Some kids think that maybe they are not a very good person  |     | Other kids are pretty sure that they are a good person.                                 | <input type="checkbox"/>  | <input type="checkbox"/> |

|     | REALLY<br>TRUE<br>for me | SORT OF<br>TRUE<br>for me |   | BUT |   | SORT OF<br>TRUE<br>for me | REALLY<br>TRUE<br>for me |
|-----|--------------------------|---------------------------|---|-----|---|---------------------------|--------------------------|
| 17. | <input type="checkbox"/> | <input type="checkbox"/>  | Some kids like school because they do well in class             |     | Other kids don't like school because they aren't doing very well. | <input type="checkbox"/>  | <input type="checkbox"/> |
| 18. | <input type="checkbox"/> | <input type="checkbox"/>  | Some kids wish that more kids liked them                        |     | Others feel that most kids do like them.                          | <input type="checkbox"/>  | <input type="checkbox"/> |
| 19. | <input type="checkbox"/> | <input type="checkbox"/>  | In games and sports some kids usually watch instead of play     |     | Other kids usually play rather than just watch.                   | <input type="checkbox"/>  | <input type="checkbox"/> |
| 20. | <input type="checkbox"/> | <input type="checkbox"/>  | Some kids are very happy being the way they are                 |     | Other kids wish they were different.                              | <input type="checkbox"/>  | <input type="checkbox"/> |
| 21. | <input type="checkbox"/> | <input type="checkbox"/>  | Some kids wish it was easier to understand what they read       |     | Other kids don't have any trouble understanding what they read.   | <input type="checkbox"/>  | <input type="checkbox"/> |
| 22. | <input type="checkbox"/> | <input type="checkbox"/>  | Some kids are popular with others their age                     |     | Other kids are not very popular.                                  | <input type="checkbox"/>  | <input type="checkbox"/> |
| 23. | <input type="checkbox"/> | <input type="checkbox"/>  | Some kids don't do well at new outdoor games                    |     | Other kids are good at new games right away.                      | <input type="checkbox"/>  | <input type="checkbox"/> |
| 24. | <input type="checkbox"/> | <input type="checkbox"/>  | Some kids aren't very happy with the way they do alot of things |     | Other kids think the way they do things is fine.                  | <input type="checkbox"/>  | <input type="checkbox"/> |
| 25. | <input type="checkbox"/> | <input type="checkbox"/>  | Some kids have trouble figuring out the answers in school       |     | Other kids almost always can figure out the answers.              | <input type="checkbox"/>  | <input type="checkbox"/> |
| 26. | <input type="checkbox"/> | <input type="checkbox"/>  | Some kids are really easy to like                               |     | Other kids are kind of hard to like.                              | <input type="checkbox"/>  | <input type="checkbox"/> |

- |            |  |   |   |                   |   |   |  |
|------------|--|---|---|-------------------|---|---|--|
| <p>27.</p> | <p>REALLY<br/>TRUE<br/>for me</p> <input type="checkbox"/> | <p>SORT OF<br/>TRUE<br/>for me</p> <input type="checkbox"/> | <p>Some kids are among the last to be chosen for games</p>                    | <p><b>BUT</b></p> | <p>Other kids are usually picked first.</p>                                     | <p>SORT OF<br/>TRUE<br/>for me</p> <input type="checkbox"/> | <p>REALLY<br/>TRUE<br/>for me</p> <input type="checkbox"/> |
| <p>28.</p> | <input type="checkbox"/>                                   | <input type="checkbox"/>                                    | <p>Some kids are usually sure that what they are doing is the right thing</p> | <p><b>BUT</b></p> | <p>Other kids aren't so sure whether or not they are doing the right thing.</p> | <input type="checkbox"/>                                    | <input type="checkbox"/>                                   |