ABSTRACT
        The effect of different degrees of pupil imitation on
male and female tutors' attitudes and behavior was investigated in
this study. Subjects were 72 sixth grade students, half male and half
female. A 3 x 2 x 2 factorial design was used (Pupil Imitation--Low,
Medium, and High; Pupil Liking--Medium and High; and Sex--Male and
Female). After two sessions of tutoring, tutors completed an opinion
form in the presence of their pupils. Tutors were told that their
pupils would complete an identical form but were in fact shown forms
completed by the experimenter. Tutors were also shown a Tutor
Evaluation Questionnaire supposedly completed by their pupils but in
fact completed by the experimenter. Tutors were subsequently asked to
complete an attitudinal measure dealing with their pupils and the
tutoring experience. An analysis of data suggests that female tutors
responded favorably to imitation by their pupils while male tutors
preferred independent behavior on the part of their tutees. The
results suggest that there may be an optimal level of conformity for
children that varies depending on the sex of the child. (HMD)

Technical Report No. 304

THE TUTOR AS ROLE MODEL: EFFECTS OF IMITATION
AND LIKING ON STUDENT TUTORS

by

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School Learning and Instructional Strategies

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Statement of Focus

Individually Guided Education (IGE) is a new comprehensive system of elementary education. The following components of the IGE system are in varying stages of development and implementation: a new organization for instruction and related administrative arrangements; a model of instructional programing for the individual student; and curriculum components in prereading, reading, mathematics, motivation, and environmental educaticn. The development of other curriculum components, of a system for managing instruction by computer, and of instructional strategies is needed to complete the system. Continuing programmatic research is required to provide a sound knowledge base for the components under development and for improved second generation components. Finally, systematic implementation is essential so that the products will function properly in the IGE schools.

The Center plans and carries out the research, development, and implementation components of its IGE program in this sequence: (1) identify the needs and delimit the component problem area; (2) assess the possible constraints—financial resources and availability of staff; (3) formulate general plans and specific procedures for solving the problems; (4) secure and allocate human and material resources to carry out the plans; (5) provide for effective communication among personnel and efficient management of activities and resources; and (6) evaluate the effectiveness of each activity and its contribution to the total program and correct any difficulties through feedback mechanisms and appropriate management techniques.

A self-renewing system of elementary education is projected in each participating elementary school, i.e., one which is less dependent on external sources for direction and is more responsive to the needs of the children attending each particular school. In the IGE schools, Center-developed and other curriculum products compatible with the Center's instructional programing model will lead to higher student achievement and self-direction in learning and in conduct and also to higher morale and job satisfaction among educational personnel. Each developmental product makes its unique contribution to IGE as it is implemented in the schools. The various research components add to the knowledge of Center practitioners, developers, and theorists.

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I
Introduction

School tutoring programs that use older students as tutors for younger students have been shown to be at least as beneficial for the tutors as for the tutees (Gartner, Kohler, & Riessman, 1971; Thelen, 1968). Among the benefits found for tutors are gains in academic skills, increased self-esteem, and improved attitudes towards teachers and school. It also has been suggested that the responsibility and status of the teacher role encourages the tutor to behave along more socially desirable lines. Certainly the tutor's perception of his role seems likely to affect his behavior.

Role theory (Sarbin & Allen, 1968), which has provided a useful theoretical framework for previous tutoring research (Allen & Feldman, 1973, 1974; Feldman & Allen, 1972), again seems helpful in considering the tutor's response to his role. Role theory is concerned with the behavior of an individual occupying a particular position in the social system. The interaction of the student tutor with his tutee is especially interesting in this context because of the tutor's dual role--student peer and teacher. Accordingly, principles and concepts derived from role theory are valuable to the researcher interested in the peer-tutoring relationship.

One useful concept drawn from this theory is role expectations--those actions and qualities expected of the person who occupies a particular position. A likely expectation for the student enacting the role of teacher is that he will be a model for his student. A possible approach to determining how this expectation of being a role model influences the tutor is to vary the extent to which he is imitated by his student and then to measure the effects on his attitudes and behavior.

In previous research, imitation by children has typically been studied in terms of the model's effect on the child's imitative behavior (Bandura, 1965; Bryan, 1972). Although it has been amply demonstrated that

children do imitate others, there has been almost no research to investigate the effect of the child's imitation on the model. Yet there is evidence that the apparently less powerful or lower status members of interpersonal systems regularly affect the more powerful or higher status members (Bates, 1972): followers influence leaders; audiences influence speakers; patients influence therapists; and, not surprisingly, children influence parents. Consistent with these findings is the prediction that imitators influence their models, and, in particular, pupils, through imitation, influence their tutors.

One study supporting the prediction that pupils influence their tutors (Bates, 1973) had male undergraduates first teach basketball plays to young boys and then perform a verbal task with them. The boys were, in fact, the experimenter's confederates, who on a given signal during the basketball task imitated the adult models either completely or not at all. The college students' positive feelings towards the boys (as expressed verbally and nonverbally) were significantly greater in the imitation than in the nonimitation condition.

The present study, using elementary school age tutors, investigates how different amounts of pupil imitation affect the attitudes and behavior of their tutors. The major prediction is that increased pupil imitation will enhance the effect on the tutor of being a model for his pupil and result in desirable attitudinal and behavioral changes in the tutors. More specifically, it was expected that increased imitation would engender in tutors a more favorable attitude towards themselves, tutoring, and the tutee, and would result in the tutor modifying his behavior to provide a better example for his pupil.

A study on ingratiation (Jones, Jones, & Gergen, 1963) found that adults prefer individuals who conform moderately to those who conform a great deal. Therefore, three levels

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of imitation--Low, Medium and High--were included in the study to determine if children might respond most favorably to moderate imitation.

In addition to imitation, amount of pupil liking for the tutor was manipulated to be either Medium or High. Imitation normally would imply liking, so without this control, results would not be subject to clear interpretation. It was expected that increased liking would have effects on the tutors' attitudes similar to those of imitation. This design permitted examination both of the individual effects of imitation and liking and of their interaction.

II
Method

Subjects

Subjects who served as tutors were 72 randomly selected sixth-grade students, 36 males and 36 females. Data were not obtained from six tutors due to absent·eism of either the tutor or his tutee, and the data from one tutor were unusable due to a procedural error. Thus, results are based on data from 65 tutors.

The tutees who were taught by the subjects serving as tutors were 72 second-grade students (36 males and 36 females). Teachers selected children as tutees who could benefit most from individual help in learning to read sight words. These younger students ranged from poor to better-than-average in reading skills. Tutees were selected from the second grade because it was expected that a large age difference would enhance the sixth-grade children's sense of responsibility for their tutees. Tutees were assigned randomly to tutors with the restrictions that each tutee was not a sibling of his tutor and was of the same sex.

Experimental Design

A 3 x 2 x 2 factorial design was used (Pupil Imitation--Low, Medium and High; Pupil Liking--Medium and High; and Sex-- Male and Female). An equal number of boys and girls were assigned randomly to each one of the six experimental conditions.

Materials

The tutoring materials were selected by the second-grade teachers. These materials consisted of lists of sight words at the appropriate level of difficulty for each second-grade student and reading games that required

the use of these sight words. Tutors were responsible for recording which lists were mastered by their tutees.

Overview of Procedure

After two sessions of tutoring, tutors completed, in the presence of their pupils, an Opinion Form (Appendix A), which was to be used for the imitation manipulation. Tutors were told their pupils would complete an identical form. Later each tutor was shown the Opinion Form supposedly completed by his pupil but in fact filled out by the experimenter. The number of pupil responses that were identical to the tutor's responses was varied according to whether the tutor was in the Low, Medium, or High Imitation condition.

For the liking manipulation, tutors were shown a Tutor Evaluatio.) Questionnaire (Appendix B), also supposedly completed by their pupils. The experimenter again had completed the responses on the form, this time to indicate either liking (for the Medium Liking condition) or extreme liking (High Liking) by the pupil for the tutor. (This procedure also ensured that tutors received only positive feedback.)

Attitudinal and behavioral dependent measures were then obtained from the tutors.

Procedure

The study was conducted in an elementary school over a period of three weeks. Each week 24 tutors, divided into two groups of six males and two groups of six females, were scheduled to complete the entire tutoring and testing procedure. (Students who were absent during the week completed the procedure the next week.) The school cafeteria was used for

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tutoring on two days, and on a third day the dependent measures were obtained.

All tutors followed the same procedure on the three days they participated in the study. On the first day, the experimenter and an assistant met with a group of six tutors of the same sex for orientation and training. After tutoring was described to them, these sixth graders were asked if they wanted to be tutors, and all agreed that they did. After 20 minutes of training in tutoring techniques, the older students were introduced to their second-grade tutees and spent the next 20 minutes tutoring. All students then returned to their classrooms.

On the second day, sixth graders and their tutees met for another 20 minutes of tutoring. Then the tutoring materials were collected and the tutors were given the Opinion Form. This form, which was to be used for the imitation manipulation, consisted of 10 multiple-choice items asking for preferences in food, color, sports, and similar categories. Tutors were informed that their pupils would complete the same form immediately after the tutors had done so, and therefore the tutors should explain and demonstrate the procedure to their pupils as they went along. After the tutors completed the task and returned to their classrooms, the second graders were administered the form.

At this time the tutees also completed a Tutor Evaluation Questionnaire, a questionnaire constructed for the pupil liking manipulation that was to take place the next day. The questionnaire consisted of three items on seven-point scales that asked how much the pupil liked his tutor, how much he liked being tutored, and how often he tried to act like an older child.

Experimental Manipulation

On the third day, the tutors and their pupils were assembled in a waiting room. Each tutor was brought individually into an adjacent room by the experimenter and shown his own Opinion Form and an Opinion Form and Tutor Evaluation Questionnaire supposedly completed by his pupil. In fact, the tutee's forms were replaced with forms completed by the experimenter. This procedure made it possible to meet the needs of the experimental design and ensured that all tutors would receive only positive feedback.

The manipulation of Pupil Imitation was accomplished by constructing the responses on the tutee's Opinion Form to agree differentially with the tutor's responses (which he had made in the presence of his tutee). Re-

sponses were made to be identical on either 30%, 70%, or 100% of the items, depending upon which imitation treatment condition the tutor was assigned to--Low, Medium, or High. To vary Pupil Liking, the experimenter marked the pupil's Tutor Evaluation Questionnaires either "I like my tutor" and "I like being tutored" (the fourth response on a seven-point scale) or "I like my tutor very, very, very much" and "I like being tutored very, very, very much" (the sixth response), depending on whether the tutor was in the Medium or High Pupil Liking condition. The third item, a neutral item, was always marked "sometimes" in answer to how often the tutee tried to act like an older child. To increase the strength of the manipulation, the experimenter explicitly pointed out to the tutors whatever similarities existed in the responses to the two Opinion Forms (the tutor's and his pupil's), and with those tutors in the Medium and High Imitation conditions the experimenter discussed briefly the innocent tendency of younger children to imitate older children.

Dependent Measures

The tutor was then given the dependent measures. The attitudinal measure consisted of nine items with multiple-choice answers on a seven-point scale (Appendix C). The questions were: "How much did you like your student?" "How nice do you think your student is?" "How much did you like tutoring?" "How much would you like to tutor again?" "How good are you as a tutor?" "How happy are you right now?" "How much would you like to have a younger child try to act like you?" "How often do you think the way you act is a good example for younger children?" and "How happy are you with the way you are?" After these items were answered, the experimenter asked the tutor casually whether he thought his pupil had imitated some of his answers on the Opinion Form. This served as a check on the imitation manipulation and also provided an indication of the tutor's response to imitation in younger children (whether he perceived it positively or negatively).

Following this, a behavioral dependent measure was obtained. The tutee was called from the waiting room and accompanied his tutor to another room. An assistant there first praised both the older and younger student for their performance in the tutoring project, thanked them, and said they would receive from her five nickels each "as a token of our appreciation." She then said that if they wanted to they could contribute some or all of this money to UNICEF, and the nature of that organization

was explained briefly. The assistant empha-
sized that the 25¢ each student was receiving
was the student's money and she did not care
what he did with it. The tutor received his
money first, so he would have an opportunity
to act as a model in making a contribution;
then the tutee received his money to keep or
to contribute. After the two students left for
their classrooms, the amount contributed by
each was recorded.

Manipulation Check

The responses given to the experimenter by the tutors in the Medium and High Imitation conditions indicated that they did feel their students had been imitating their answers on the Opinion Form. Furthermore, the tutors did not say anything to suggest that they regarded this imitation with disfavor or as a form of academic "copying," rather, they tended to dismiss it with a laugh or a shrug.

Analysis

Data from the dependent measures were analyzed by a 3 x 2 x 2 least squares analysis of variance. Factors were Pupil Imitation (Low, Medium and High), Pupil Liking (Medium and High), and Sex (Male and Female).

On the first attitudinal measure, amount of tutor liking for his pupil, a significant interaction was found between Imitation and Sex [$F(2,53) = 4.21$, $\underline{p} < .02$]. No other effects or interactions were significant. The Imitation x Sex interaction indicates that the greater the pupils' imitation of the tutors, the less the male tutors liked their pupils and the more the female tutors liked theirs. Figure 1 presents the means associated with this interaction.

As can be seen from Figure 1, as imitation increases, the male tutors show less liking for their pupils. The reverse is true for the female tutors: when their pupils imitate them to a low or medium extent, the girls like their pupils less than when their pupils imitate them to a high extent. Duncan's multiple-range test was used to compare Low and High Imitation for each sex. The difference was signifi-
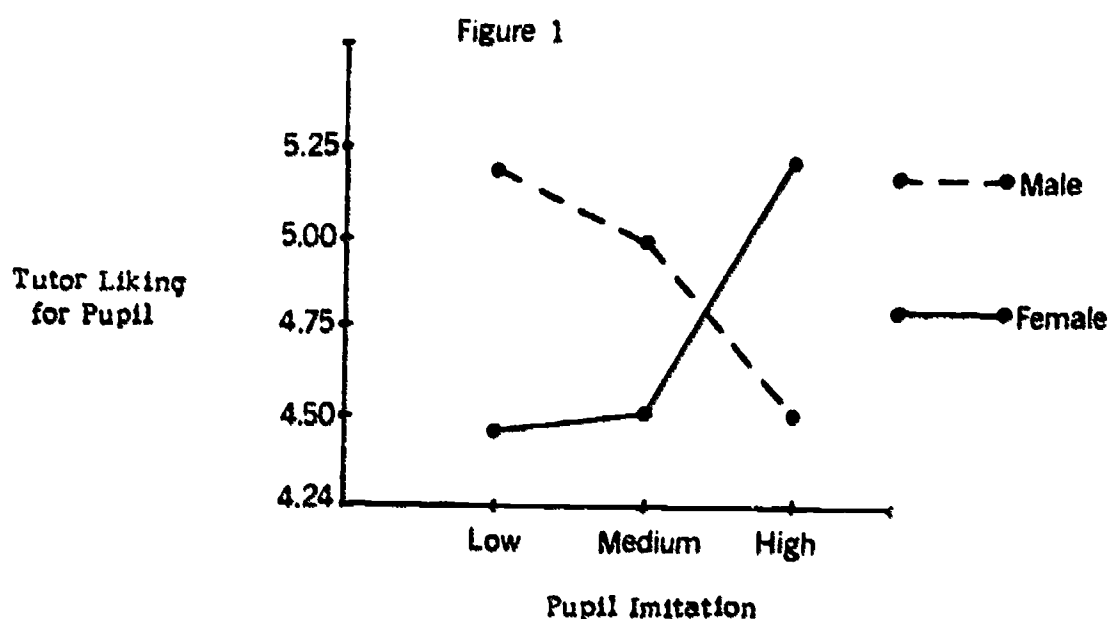

Figure 1. Relationship of pupil imitation and tutor liking for pupil.

cant for both the females ($p < .025$) and the males ($p < .05$).

On the item assessing mood, "How happy are you right now?" there was a significant interaction between Pupil Liking and Pupil Imitation [$F(2,53) = 3.22$, $p < .05$]. In the Medium Pupil Liking condition, the means were 4.18, 4.20 and 4.91 for increasing levels of Pupil Imitation; for High Pupil Liking, the corresponding means were 5.00, 4.91 and 4.18. This indicates that tutors who believed they were liked a medium amount by their tutees were happiest in the High Imitation condition, and tutors who believed they were highly liked were the happiest in the Low and Medium Imitation conditions. No other main effects or interactions were significant.

The other six items did not differentiate among conditions, and analyses did not yield any interesting trends or patterns.

The only significant result from the behavioral measure (the number of nickels tutors contributed to UNICEF in the presence of their tutees) was a trend ($p < .06$) towards an interaction between Liking and Imitation. The means for tutors in the Medium Liking condition were 3.00, 3.60 and 2.18 when the tutors believed they were imitated to a low, medium or high extent, and in the High Liking condition the corresponding means were 2.36, 1.45, and 3.00. These results make little theoretical or psychological sense and will not be discussed.

IV
Discussion

The assertion that increased pupil imitation enhances the effect of being a model and results in attitudinal and behavioral changes in the tutor is only minimally supported by the findings. The study does confirm the hypothesis that a pupil's imitation affects the tutor's attitude toward that pupil. Although the female tutors seemed to prefer being highly imitated, the male tutors' response to imitation raises the question of whether tutors may not in certain circumstances dislike being responded to as a model.

The difference in attitudes of boys and girls towards younger children who imitate them may be consistent with traditional sex roles. Studies indicate that females are higher in dependency, social passivity, and conformity than males (Mischel, 1970). Research on sex stereotypes also shows that independence is considered to be a male trait (Rosenkrantz, Vogel, Bee, Broverman & Broverman, 1968) and conformity, a female trait (Nichols, 1962). Therefore, it may be that male tutors' role expectancies for their male pupils include the characteristic of independent behavior, and female tutors have the reverse expectancies for their female pupils. Since this study used only same-sex pairs, a replication using both same-sex and cross-sex pairs would be an appropriate extension. Such research could clarify whether elementary school boys prefer younger girls who imitate them more (as the role expectancy interpretation would predict) or whether the male tutors' own values of independence cause them always to prefer independent behavior. Similarly, the same relationship can be explored in relation to girls' reactions to male pupils.

The results suggest that, just as there is an optimal level of conformity for adults (Jones et al., 1963), there may be an optimal level of imitation for children that varies depending upon the sex of the child. Relevant to tutoring programs, then, is the possibility that better relations may be fostered between male tutors and their male tutees when the tutees are allowed to perform occasionally in an independent manner. At present, these interactions are often limited to the tutor's eliciting specific, determined responses. Further research along these lines would be helpful.

The lack of any significant results from the behavioral dependent measure may be explained by the unfortunate timing of the study, which took place from November 27th through December 15th. With Christmas approaching, several of the participating students expressed dismay over the conflict that resulted from their wanting to contribute to UNICEF and needing to save money to buy presents for family members. This undoubtedly lowered the amount of money contributed. It is also probable that some of the tutors, who otherwise might have donated more, felt they had a good excuse to use in front of their tutees.

The results suggest some interesting avenues for future research. At a time when there is an increased effort to understand sex differences and their effects on students, the educational importance of studies of this nature is clear. The findings are relevant to two areas of educator concern: cross-age relationships between students of different sexes and, more specifically, procedures for implementing elementary school tutoring programs that are maximally beneficial to both tutor and tutee.

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Appendix A
Opinion Form

Opinion Questionnaire

Pick one answer to each question and circle it.

Tutor's Answers	Student's Answers
1. The color I like most is:	
a) red	a) red
b) blue	b) blue
c) yellow	c) yellow
d) purple	d) purple
2. The sport I like most is:	
a) basketball	a) basketball
b) ice skating	b) ice skating
c) football	c) football
d) swimming	d) swimming
3. My favorite kind of car is a:	
a) jeep	a) jeep
b) sports car	b) sports car
c) stationwagon	c) stationwagon
d) race car	d) race car
4. The animal I like most is a:	
a) dog	a) dog
b) cat	b) cat
c) horse	c) horse
d) guinea pig	d) guinea pig

	Tutor's Answers	Student's Answers

Tutor's Answers   Student's Answers

5. I would like most to ride a:

    a) motorcycle   a) motorcycle

    b) bicycle   b) bicycle

    c) horse   c) horse

    d) snowmobile   d) snowmobile

6. I wish I could eat:

    a) a steak   a) a steak

    b) a peanut butter   b) a peanut butter
       and jelly sandwich   and jelly sandwich

    c) some french fries   c) some french fries

    d) a piece of   d) a piece of
       chocolate cake   chocolate cake

7. The season I like most is:

    a) summer   a) summer

    b) winter   b) winter

    c) spring   c) spring

    d) fall   d) fall

8. If I was in the band I'd like to play the:

    a) trumpet   a) trumpet

    b) flute   b) flute

    c) drums   c) drums

    d) trombone   d) trombone

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Tutor's Answers	Student's Answers

9. What I'd like to see the most is a:

a) movie	a) movie
b) circus	b) circus
c) ball game	c) ball game
d) parade	d) parade

10. I would like most to drink:

a) coke	a) coke
b) a milkshake	b) a milkshake
c) lemonade	c) lemonade
d) apple juice	d) apple juice

Appendix B
Tutor Evaluation Form

Name _____

Choose the answer you think is best for each question and put an X on the line above it.

Example: How much do you like to eat spinach?

___	___	___	___	___
not at all	a little bit	very much	very, very much	very, very, very much	more than anything else

1. How much did you like your tutor?

___	___	___	___	___	___
not at all	a little bit	some	I liked my tutor	liked my tutor very much	liked my tutor very, very, very much	more than anybody else

2. How much did you like being tutored?

___	___	___	___	___	___
not at all	a little bit	some	I liked it	liked it very much	liked it very, very, very much	more than anything else

3. How often do you try to act like an older child, for example, a sixth grader?

___	___	___	___	___
never	not very often	sometimes	often	most of the time	all the time

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Appendix C
Attitude Measure

Choose the answer you think is best for each question and put an X on the line above it.

Example: How much do you like to eat spinach?

| not at all | a little bit | very much | very, very much | very, very, very much | more than anything else |

1. How much did you like your student?

| not at all | a little bit | very much | very, very much | very, very, very much | more than anybody else |

2. How nice do you think your student is?

| not very nice | sort of OK | nice | very nice | terrific | the nicest person I know |

3. How much did you like tutoring?

| not at all | a little bit | liked tutoring | liked tutoring very much | liked tutoring very, very, very much | liked tutoring more than anything else |

4. How much would you like to tutor again?

| not at all | a little bit | want to | want to very much | want to very, very, very much | want to more than anything else |

5. How good are you as a tutor?

| poor | OK | good | very good | very, very good | very, very, very good |

6. How happy are you right now?

| not at all | not very much | happy | very happy | very, very happy | very, very, very happy |

7. How much would you like to have a younger child try to act like you?

| not at all | not very much | a little bit | quite a bit | a lot | a whole lot |

8. How often do you think the way you act is a good example for younger children?

| never | not very often | sometimes | often | most of the time | all the time |

9. How happy are you with the way you are?

| not at all | not very much | sort of happy | happy | very happy | completely happy |