The Effectiveness of Human Relations Training for Proctors in a Mastery Based Educational Psychology Course.

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by

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Abstract

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In order to investigate the effectiveness of human relations training for proctors, students of a mastery based educational psychology class were randomly assigned to be tutored by either a proctor who had received training in human relations skills or a proctor who had not. Results indicated that those tutored by the trained proctors showed significantly higher rates of learning and quality of learning. Rating scales indicated that these higher rates were due to the more empathetic and understanding behaviors of the trained proctors. Viewed as a pilot study, this research implies the need for further investigation into the proctor-student interaction component of personalized systems of instruction.
The Effectiveness of Human Relations Training for Proctors in a Mastery Based Educational Psychology Course

The use of student tutors or proctors has become a well accepted mode of instruction. Some utilize proctoring as a means of dealing with large numbers of students in a class (Keller, 1968). Others encourage proctoring as a learning experience for the proctors (Gartner, Kohler and Reissman, 1971).

Though the research on proctoring does contain numerous, and at times detailed, descriptions of the training of the proctors, invariably the training excludes any type of emphasis on the development of human relations skills. This would seem to be a costly error in the light of recent developments on the effectiveness of communication skills in teaching (Aspy, 1972; Kratochvil, et al, 1969; Stoffer, 1970; Berenson, 1972).

This study was an attempt to answer the question: Is there a significant difference between the effectiveness of proctors trained in human relations skills in comparison to proctors without this training?

Method

An educational psychology class of 32 junior level students was chosen for the study. Each of these students' experience in formal education courses was confined to an introduction course of one quarter prior to the experimental quarter. The class was structured so that there
were eight units of material to be mastered at the 100% level. These units corresponded to eight chapters in Biehler's (1974) textbook. Corresponding chapters in a readings book were also assigned but not directly incorporated into the unit tests. Tuesdays and Thursdays were designated as test days. On Mondays, Wednesdays and Fridays class attendance was optional. Class time was spent on discussions, lectures, projects or could be used as test days as well. Unit tests were multiple choice items from those accompanying Biehler's text and were available in several forms for each unit. On ambiguous items students were given the opportunity to defend their choices and were given credit if they did so to the satisfaction of the proctor.

Students were randomly assigned to proctors so that each of the 8 proctors had 4 students. If necessary meeting times other than the regularly scheduled 10-11 a.m. class time were arranged individually between proctor and student.

The 8 proctors were divided into two groups viz. the trained and the untrained. The 4 untrained were randomly selected from the "Block" course which in North Georgia College's education program immediately follows the educational psychology course. They all had achieved mastery in Educational Psychology the previous quarter and were exposed to the same texts and the same instructor. Their instructions were to administer tests to the students,
answer any questions which the students might have and to keep a record of all tests taken and the number wrong on each test. Their time spent proctoring was accepted as partial fulfillment of their "Block" requirements.

The 4 trained proctors were chosen at random from the "Block" course of the previous quarter. These individuals had participated in a 2hr./day for 5 days workshop in human relations. This workshop consisted of the following sequence of activities:

1. Presentation - Discussion of the characteristics of effective teachers (helpers) utilizing ideas by Hamachek (1969).

2. Experimental exercises to foster awareness of personal interaction utilizing ideas by Brown (1971).

3. Human Relations skills of facilitation and action were discussed, demonstrated, role played and evaluated utilizing Carkhuff's model as presented by Gazda, et al (1973). The skill of communicating empathy was focused on as the most essential tool for the facilitation of learning. Empathy is defined here as the ability to communicate to the helpee that he is understood. Proctors role-played helpers and helpees, watched an experienced counselor demonstrate empathy, and evaluated written case studies of helper-helper interaction for their empathetic content.
4. Flanders interaction analysis technique for rating teacher-student interaction was utilized by the proctors on video tapes of actual classroom. This was done to facilitate the ability to transfer empathetic skills to a learning situation.

5. Evaluation of those attending the workshop was carried out by having them rate various possible responses to a written statement and then comparing their ratings to Gazda's Key. By this process the trained proctors all achieved at the functionally facilitative level of above 3.0 on a 4.0 scale.

At the beginning of their proctoring duties the trained proctors were led in a discussion or refresher-session on effective human relations and were then encouraged to be empathetic when administering tests and answering questions of the educational psychology students.

Evaluation

1. Each proctor kept a record of the number of times each student took a form of a unit test as well as the number incorrect on each test. This was used as a measure of the rate of learning and the quality of learning respectively.

2. Each student anonymously rated his proctor on a rating scale of behavioral characteristics. This scale is an adaption of a group process evaluation scale, as cited in Shertzer and Stone (1974), used in informally studying
graduate student process groups at Purdue University. It asked the student to rate his proctor on the dimensions of contributing, stimulating, adapting, identifying and facilitating. The focus of the scale was on behaviors pertinent to a helper-helpee situation.

3. Each student anonymously rated his proctor on a rating scale of personal effectiveness. This scale is a modified version of a scale for judging teacher's personal effectiveness as found in Horrocks (1964). The focus of this scale is on behaviors thought to be facilitative to growth in an educational (learning) situation.

4. Each student was asked to react to his relationship with his proctor and to the value of his proctor in helping him to achieve mastery.

5. Each student anonymously rated the course for its educational value.

Results

Number of tests/unit to mastery. Figure 1 and Table 1 show the comparison of the number of tests taken per-unit to mastery for each of the eight units. As indicated, the students tutored by the trained proctors were consistently lower in the number of tests taken. However, these differences were found to be significant (.01 level) only for unit four. Significance for this test and the following were determined utilizing a t-test for means of small samples. It should be noted that the lack of differences
### Table 1

The average number of tests to mastery and the difference between the averages for students of trained and untrained proctors

<table>
<thead>
<tr>
<th>Unit</th>
<th>Average # of Tests to Mastery</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Trained</td>
<td>Untrained</td>
</tr>
<tr>
<td>1</td>
<td>3.31</td>
<td>4.00</td>
</tr>
<tr>
<td>2</td>
<td>1.92</td>
<td>2.73</td>
</tr>
<tr>
<td>3</td>
<td>1.23</td>
<td>1.64</td>
</tr>
<tr>
<td>4</td>
<td>1.17</td>
<td>2.30</td>
</tr>
<tr>
<td>5</td>
<td>1.33</td>
<td>1.82</td>
</tr>
<tr>
<td>6</td>
<td>1.00</td>
<td>1.13</td>
</tr>
<tr>
<td>7</td>
<td>1.17</td>
<td>1.00</td>
</tr>
<tr>
<td>8</td>
<td>1.00</td>
<td>1.00</td>
</tr>
</tbody>
</table>

*Significant at .01 level.*
FIGURE 1
MEAN NUMBER OF UNIT TESTS TO MASTERY FOR STUDENTS OF TRAINED AND UNTRAINED PROCTORS

![Graph showing the mean number of unit tests to mastery for students of trained and untrained proctors.](image-url)
TABLE 2

AVERAGE NUMBER WRONG PER UNIT TEST AND THE DIFFERENCES BETWEEN THE AVERAGES FOR STUDENTS OF TRAINED AND UNTRAINED PROCTORS

<table>
<thead>
<tr>
<th>Unit</th>
<th>Average Number Wrong/Test</th>
<th>Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Trained</td>
<td>Untrained</td>
</tr>
<tr>
<td>1</td>
<td>3.60</td>
<td>4.05</td>
</tr>
<tr>
<td>2</td>
<td>2.19</td>
<td>2.60</td>
</tr>
<tr>
<td>3</td>
<td>0.38</td>
<td>1.41</td>
</tr>
<tr>
<td>4</td>
<td>0.18</td>
<td>2.49</td>
</tr>
<tr>
<td>5</td>
<td>0.78</td>
<td>3.36</td>
</tr>
<tr>
<td>6</td>
<td>0.00</td>
<td>0.63</td>
</tr>
<tr>
<td>7</td>
<td>0.50</td>
<td>0.00</td>
</tr>
<tr>
<td>8</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

*Significant at .05 level.
**Significant at .01 level.
FIGURE 2

THE MEAN NUMBER WRONG PER UNIT TEST FOR STUDENTS OF TRAINED AND UNTRAINED PROCTORS

Untrained

Trained

Mean # Wrong/Test

Units
TABLE 3
MEAN RATINGS BY STUDENTS OF TRAINED AND UNTRAINED PROCTORS ON BEHAVIORAL CHARACTERISTICS RATING SCALE

<table>
<thead>
<tr>
<th>Behavioral Characteristic</th>
<th>Mean Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Trained</td>
</tr>
<tr>
<td>Contributing</td>
<td>2.56</td>
</tr>
<tr>
<td>Stimulating</td>
<td>2.49</td>
</tr>
<tr>
<td>Adapting</td>
<td>1.56</td>
</tr>
<tr>
<td>Identifying</td>
<td>2.22</td>
</tr>
<tr>
<td>Facilitating</td>
<td>2.11</td>
</tr>
<tr>
<td><strong>Total Mean Rating</strong></td>
<td><strong>2.1778</strong></td>
</tr>
</tbody>
</table>

| Mean Difference           | 1.45859     |
| +- Ratio                  | 4.86839*    |

*Significant at .01 level.
### TABLE 4

Mean Ratings by Students of Trained and Untrained Proctors on Behaviors Effective for Facilitating Learning

<table>
<thead>
<tr>
<th>Proctor Effective in</th>
<th>Mean Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Trained</td>
</tr>
<tr>
<td>Getting student response</td>
<td>1.56</td>
</tr>
<tr>
<td>Creating friendly learning atmosphere</td>
<td>1.44</td>
</tr>
<tr>
<td>Establishing a feeling of security</td>
<td>1.89</td>
</tr>
<tr>
<td>Exerting a stabilizing influence</td>
<td>1.11</td>
</tr>
<tr>
<td>Inspiring originality and initiative</td>
<td>1.67</td>
</tr>
<tr>
<td>Developing student self-reliance</td>
<td>1.67</td>
</tr>
<tr>
<td>Total Mean Rating</td>
<td>1.6111</td>
</tr>
</tbody>
</table>

Mean Difference: .707071

+- Ratio: 4.18362*

*Significant at .01 level.
for units 6, 7, and 8 may be explained by the "break-down" of the proctoring structure at that time. All of the untrained proctors had to be out of town for their field experiences necessitating the instructor giving some tests, the trained proctors giving tests to both groups of students, and the advanced students giving tests to the slower students.

Number of questions wrong per test. Figure 2 and Table 2 indicate the differences found between the two groups. The group tutored by the trained proctors were consistently lower in the number of questions missed per test. Significant differences at the .05 level and .01 level were found for units 3, 4, and 5.

Rating Scale of Behavioral Characteristics. This scale aims at an evaluation of behavior in any interactive setting. Table 3 presents the comparison of the student's rating of the proctors. There were six behavioral characteristics to rate, each on a scale of 1 to 5. One being the highest valued rating and five the lowest. As can be seen from the Table, the trained proctors rated more favorably on each of the dimensions. A t-test was performed on the mean ratings and the difference was found to be significant at the .01 level.

Rating Scale of Proctors' Personal Effectiveness. This scale deals with personal characteristics believed to facilitate educational goals. Table 4 presents a comparison
of the student's rating of the proctors in regards to personal effectiveness. A rating of one is the most desired value and five the least desired. As can be seen from Table 4, the trained proctors rated significantly more favorably than the untrained proctors.

**Open-ended Questions on Proctor-Student Relations.** In order to gather information concerning proctor-student interaction which might lend itself more to an open-ended evaluation, the following two open-ended questions were asked:

1. Describe your relationship with your proctor.
2. Evaluate your experience with your proctor in terms of being helped to master the "material" of educational psychology.

It is difficult to objectively present results from questions of this type. However, there seemed to be the pattern of those students who rated their proctors in the least desirable half of the scale expressing their annoyance at having their answers compared to the answer key of a book rather than being able to defend their own answers. Typical expressions were:

"...exams were...strictly from the textbook...no comments, personal interpretations, etc..."

"It seemed that if I understood why I missed a problem because of conflicting ideas it didn't matter - It was still wrong..."

"She (proctor) didn't really help me master the mate-
rial. She was there to give a test, grade and tell the grade."

"...Whenever I asked a question she would always get the big black book (key) out...It got to the point...I did not ask any questions."

In contrast to the above comments are the comments of those students who rated their proctors most favorably. Some comments of students on their more highly valued proctors were:

"She valued the way I thought..."

"...but we would work out the problems..."

"...She seemed to be understanding and ready to listen to explanations of different answers."

"She would always listen to my reasoning and take it into consideration."

Rating of Educational Value of Course. The students were asked to rate the course for its educational value. A scale from 1-10 was provided, with one being designated as worthless and ten as priceless. Along with the rating scale space was provided to respond to what was liked most about the course, liked least and for general comments about the course.

The students of the trained proctors evaluated the course at a mean rating of 5.77. The students of the untrained evaluated the course at a mean rating of 5.81. The difference was not significant. The open-ended comments showed no
obvious differences between the two groups. However, there were some consistent likes and dislikes. The likes were for tests when given orally, self-pacing, ability to relate to and interact with a proctor. Dislikes were for the amount of work, limits on proctoring sessions and, at times being treated as an object by the proctor.

Summary and Conclusions:

This study set out to answer the question: Would there be a significant difference between the effectiveness of proctors trained in human relations techniques in comparison with proctors without this training? The results indicate that there is a significant difference namely, those students who were tutored by proctors trained in human relations (Carkhuff's Model) demonstrated a faster rate of learning and a higher quality of learning.

The results indicate further that apparently a period of time must expire before the nature of the proctor-student relationship solidifies. Hence, the significant differences in units 3-5 but not in 1 and 2.

The rating scales indicate that the trained proctors may have been more effective because they were perceived as possessing, on a more functional level, behaviors more conducive to fostering a helping relationship and a learning environment than were the untrained proctors.

Open-ended questions generated responses suggesting the students desired input into their evaluation. They liked
being able to put concepts into their own ideas and to have these accepted. They resented being forced to match wits with an inanimate textbook and preferred the interaction and immediate feedback of an empathetic, understanding human being.

Though the educational value of the course was rated equally by both groups of students one wonders if differences would not be found had the students been asked to rate the personal satisfaction value or the social value of the course.

The author of this study recognizes many of the limitations of this study and in many ways views this research as simply a pilot study. However, the results presented here as well as numerous off-the-cuff comments of students, proctors and faculty members lead him to believe that the utilization of trained proctors to foster learning is amply warranted.

Recommendations. Within the limitations of this study the effective role of the understanding proctor has been confirmed. However, several needs are:

1. To evaluate proctor effectiveness with more appropriate and accurate instruments; larger numbers of subjects and greater flexibility but control over proctor-student schedules.

2. To evaluate mastery with keyed oral tests so that the maximum effect of the understanding
proctor may be more accurately measured.

3. To have ongoing training sessions with proctors to reinforce and bolster human relations skills.

4. To evaluate changes in student attitudes, self-concept and the like as a result of exposure to helping relationships.

5. To maintain the mastery approach but to limit the number of units and emphasize application-type projects.
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