ABSTRACT

This document defines invitational teachers as those special teachers who have the ability to invite their students to achieve. Invitational teachers hold positive perceptions about themselves and see students as able, valuable, and capable. The major problem associated with employing more invitational teachers has been one of identification; this study tested a set of self-instructional materials which would supply teacher selection officials with the skills necessary to make accurate assessment of perceptual orientations for use in teacher selection. The results indicate that teacher selection officials can be trained to use perceptual inference data in making teacher selection decisions. The self-instructional material developed provided selection officials with a high degree of inference skill. A second conclusion was that the ability to make reliable perceptual evaluations depends to some degree on the perceptual orientation of the person making the evaluation. (Author/BD)
SELECTING INVITATIONAL TEACHERS:
THE USE OF PERCEPTUAL DATA IN THE TEACHER SELECTION PROCESS

SESSION 16:23

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Purkey (1978) suggests that one characteristic of effective teachers is their ability to INVITE students to be competent and successful. The ability and inclination to invite students depends to a large degree on the teacher's perceptual orientation (the attitudes, values and beliefs the teacher holds). Invitational teachers have characteristically positive perceptions about themselves and students. They tend to see themselves as capable and important. They perceive students as being valuable, able, and capable. Thus, perceptual orientation offers a key by which invitational teachers can be identified and selected.

In more than 10 studies, teachers' perceptual orientations have been shown to differentiate effective from ineffective teachers (Coombs and Soper, 1963; Gooding, 1964; Usher, 1966; Doyle, 1969; Vonk, 1970; Brown, 1970; Dedrick, 1972). These findings should be of importance to persons involved with teacher selection.

The major roadblock to implementing these perceptual research findings has been the need for highly trained raters to make inferences about teachers' perceptual orientations. The study described in this paper (Wasicsko, 1977) was designed to develop and test self-instructional materials which would enable teacher selection officials to apply the results of perceptual research. In doing so, invitational teachers can more readily be identified and selected. This study also investigated the factors that affect inference reliability.

Three hypotheses were tested in this study. The first was that through the self-instructional material developed, selection officials would be able to make perceptual inferences with at least 80% agreement with highly trained raters. Hypothesis 2 tested the relationship between perceptual orientation and inference skill. It was hypothesized that the perceptual orientation associated with teacher effectiveness would be related to high agreement scores. Hypothesis 3 tested for effect of training with the self-instructional materials.

METHOD

Subjects
The subjects in this study consisted of volunteer teacher selection officials. A majority of the subjects were acquired with the
of the Florida Educational Research and Development Council (FERDC). FERDC is an organization consisting of educators in 32 Florida counties. Its goals are to support educational research throughout the state. A letter was sent to county representatives, describing the study and soliciting volunteers.

A second group of educators expressed interest in the study and were accepted as subjects. This group was comprised of twenty faculty members at the University of Ottawa and Brock University in Ontario, Canada. A total of 74 educators involved with teacher selection volunteered to participate.

Thirty educators (23 from FERDC and 7 from Canada) returned all the required materials and comprise the subjects for this research. Following is the occupational breakdown of the subjects:

- Principals (secondary and elementary) 4
- Superintendents and assistants 8
- Deans (college and junior college) 3
- College instructors 10
- Selection personnel 5

Twenty teacher education instructors from Columbus College in Columbus, Georgia were asked to participate as a control group. These people received no training in either perceptual theory or rating of perceptual orientation, and they participated by scoring the post-test.

Instrumentation

Self-instructional materials. One major problem associated with perceptual research has been that it is "non-reproducible." That is, the research hinged on the judgments of highly trained raters. The training needed to make perceptual ratings has not been available except through direct contact with either Dr. Arthur Combs or those trained directly by him. Therefore, up to this time the results of perceptual research have been difficult to implement. This study attempts to alleviate this problem by providing the skills and knowledge necessary to make perceptual ratings through the use of a set of self-instructional materials. The self-instructional materials developed for use in this study paralleled the training procedures used in workshops for training perceptual raters. Copies of this material are available from the author.

The self-instructional material consisted of training in the use of four perceptual factors or characteristics. These factors were:

(NOTE: The left-hand column corresponds to perceptual characteristics of effective teachers and the right-hand to ineffective teachers.)
PERCEPTIONS OF SELF:

**IDENTIFIED**
The teacher feels a oneness with all mankind. He perceives himself as deeply and meaningfully related to persons of every description.

**UNIDENTIFIED**
The teacher feels generally apart from others. His feelings of oneness are restricted to those of similar beliefs.

PERCEPTIONS OF OTHERS:

**ABLE**
The teacher sees others as having capacities to deal with their problems. He believes others are basically able to find adequate solutions to events in their own lives.

**UNABLE**
The teacher sees others as lacking the necessary capacities to deal effectively with their problems. He doubts their ability to make their own decisions and run their own lives.

PERCEPTIONS OF PURPOSE:

**LARGER**
The teacher views events in a broad perspective. His goals extend beyond the immediate to larger implications and contexts.

**SMALLER**
The teacher views events in a narrow perspective. His purposes focus on immediate and specific goals.

FRAME OF REFERENCE:

**PEOPLE**
The teacher is concerned with the human aspects of affairs. The attitudes, feelings, beliefs, and welfare of persons are prime considerations in his thinking.

**THINGS**
The teacher is concerned with the impersonal aspects of affairs. Questions of order, management, and details of things and events are prime considerations in his thinking.

Human relations incidents. Gathering information about individuals' perceptual orientation is not a direct process. Perceptions are internal to persons and thus are accessible only through inference.

A direct approach, and one with great appeal, is to confront and ask the person for information. This is called a self-report. The major problem with this "direct" approach is that research has not demonstrated a one-to-one relationship between self-report information and perceptions. Combs, Avila, and Purkey (1971), Combs and Soper (1963), and Parker (1966) have shown that self-concept (the person's actual perceptions about himself) and the way he reports himself to be may not be synonymous. Self-reports provide useful information, but like specific isolated behaviors, supply little information without
some understanding of the purposes and goals underlying the self-report. In order to overcome this problem, inferences are necessary which take into account causative factors, such as purposes, beliefs, and attitudes. Inferential raters must be trained to determine whether self-report data are accurate and can be accepted at face value or when socially desirable or expected responses are being supplied.

Theoretically, any behavior should provide insight into another person's perceptual field (Combs, Richards and Richards, 1976). The term "behavior" is used in a broad sense: written themes, letters, recordings of conversation, diaries, biographies, even conversation itself can be used as behavior for making inferences. In several studies (Combs and Soper, 1963; Dedrick, 1972; Vonk, 1970), written accounts of teaching situations have been used as examples of behaviors upon which to draw inferences. These are called human relations incidents (HRI) and are the basis of the materials developed.

A human relations incident consists of the written description of an interpersonal interaction. The instructions used for human relations incidents in the study were:

I would like you to think of a significant past event which involved yourself in a teaching role and one or more other persons. That is, from a human relations standpoint, this event had special meaning for you.

PROCEDURE

Two sets of human relations incidents (HRI) were collected for this study. The first set served as material for the self-instructional material and the post-test. These incidents were collected from three graduate educational psychology classes at Columbus College in Columbus, Georgia. The students were primarily public school teachers from Muscogee County, Georgia.

All HRI's used in the training material were submitted anonymously. These HRI's were rated by three perceptual raters. The inter-rater agreement on the 31 HRI's used for the self-instructional materials and the post-test was .93. Ratings made by the perceptual raters served as the criteria with which ratings by selection officials were judged.

In order to test the second hypothesis, a second set of HRI's were collected from selection officials participating in the study. The purpose of these HRI's was to secure information about the subjects' perceptual organization.

RESULTS

The first hypothesis stated that, using the self-instructional materials developed for this study, selection officials will be able
to make perceptual inferences in agreement with highly trained and carefully selected perceptual raters. A minimum per cent of agreement was set at .80 on the 60 inferences made in the post-test. Trained perceptual raters' inter-rater agreement on the post-test material is .93.

The mean percent of agreement score for the 30 subjects was .83 with a standard deviation of .08. A two-tailed t-test performed indicated that the true mean for the subject population (selection officials trained with self-instructional materials [hereafter called SIM raters]) has confidence intervals of .80 to .86 \((t = 2.04)\). Thus it can be concluded at the 95% confidence level that a minimum percent of agreement of .80 was reached.

Hypothesis 2 stated that a relationship existed between the SIM raters' perceptual orientation and percent of agreement score. Trained perceptual raters had a .95 inter-rater agreement on their evaluation of the SIM raters' perceptual orientation. SIM raters were divided into four groups based on ratings of perceptual orientation (Low, Low-Medium, High-Medium, High). The mean percent of agreement score for each group is shown in Table 1.

### Table 1

<table>
<thead>
<tr>
<th>GROUP</th>
<th>(\bar{X})</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>.783</td>
<td>8</td>
</tr>
<tr>
<td>Low - Medium</td>
<td>.786</td>
<td>8</td>
</tr>
<tr>
<td>High - Medium</td>
<td>.874</td>
<td>8</td>
</tr>
<tr>
<td>High</td>
<td>.875</td>
<td>6</td>
</tr>
</tbody>
</table>

One-way analysis of variance with unequal n's was performed (Table 2). ANOVA indicated a significant difference between groups \(F = 4.00; df = 3, 29; p < .025\).

### Table 2

<table>
<thead>
<tr>
<th>SOURCE</th>
<th>SUM OF SQUARES</th>
<th>df</th>
<th>MEAN SQUARE</th>
<th>F-Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>BETWEEN GROUPS</td>
<td>.060</td>
<td>3</td>
<td>.020</td>
<td>4.00*</td>
</tr>
<tr>
<td>WITHIN GROUPS</td>
<td>.117</td>
<td>26</td>
<td>.005</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>.177</td>
<td>29</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* \(p < .025\)
The Scheffe method of multiple comparison was applied to the data. The contrasts listed in Table 3 were tested.

**TABLE 3**  
COMPARISON OF GROUP CONTRASTS USING SCHEFFE'S METHOD OF MULTIPLE COMPARISONS  

<table>
<thead>
<tr>
<th>CONTRASTS ((\hat{y}))</th>
<th>ESTIMATOR OF CONTRASTS ((\hat{\beta}))</th>
<th>ESTIMATOR OF STANDARD DEVIATION ((\hat{\beta}/\hat{\sigma}))</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. (\mu_1 - \mu_2)</td>
<td>-.003</td>
<td>.035</td>
</tr>
<tr>
<td>B. (\mu_1 - \mu_3)</td>
<td>-.091</td>
<td>.035</td>
</tr>
<tr>
<td>C. (\mu_1 - \mu_4)</td>
<td>-.092</td>
<td>.038</td>
</tr>
<tr>
<td>D. (\mu_2 - \mu_3)</td>
<td>-.068</td>
<td>.035</td>
</tr>
<tr>
<td>E. (\mu_2 - \mu_4)</td>
<td>-.089</td>
<td>.038</td>
</tr>
<tr>
<td>F. (\mu_3 - \mu_4)</td>
<td>-.001</td>
<td>.038</td>
</tr>
<tr>
<td>G. (\mu_1 + \mu_2 - 2(\mu_3 + \mu_4)/2)</td>
<td>-.090</td>
<td>.026</td>
</tr>
</tbody>
</table>

* Significant contrast (\(p < .05\))

One contrast (G), which consisted of the mean of groups 1 and 2 minus the mean of groups 3 and 4, was significant (\(p < .05\)).

The third hypothesis was designed to test the self-instructional material. It stated that subjects receiving training with the self-instructional materials would have higher percent of agreement scores on the 15 item post-test than a group receiving no training. A two-tailed t-test was conducted with the level of significance at .05. The hypothesis that the population means were equal was rejected. The obtained \(t\) was 2.370 (\(p < .025\)).

**TABLE 4**  
TWO-TAILED t-TEST COMPARING UNTRAINED RATERS AND SIM RATER GROUP

<table>
<thead>
<tr>
<th>GROUP</th>
<th>GROUP MEAN</th>
<th>n</th>
<th>(s^2)</th>
<th>OBTAINED t</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBJECT</td>
<td>.827</td>
<td>30</td>
<td>.006</td>
<td>2.370*</td>
</tr>
<tr>
<td>CONTROL</td>
<td>.763</td>
<td>20</td>
<td>.013</td>
<td></td>
</tr>
</tbody>
</table>

* \(p < .05\) (.975 t 48 = +2.010)
Two hypotheses were developed to test the self-instructional materials (H1 and H3). Through the first hypothesis, the inference skills of selection officials trained in the use of perceptual characteristics were tested. A minimum percent of agreement for selection officials with trained perceptual raters was set at .80. With the SIM developed, volunteer selection officials were able to meet the .80 criterion. This indicates that the sample population can make perceptual inferences in agreement with highly trained raters through training supplied by SIM. Thus, it appears that SIM training may be substituted for individualized training used in previous perceptual research.

Another factor related to the first hypothesis was the degree to which the four perceptual factors used in the training material met the .80 criterion. Table 5 presents the mean percent of agreement for each of the perceptual factors used in the study.

<table>
<thead>
<tr>
<th>IDENTIFIED - UNIDENTIFIED</th>
<th>.865</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABLE - UNABLE</td>
<td>.822</td>
</tr>
<tr>
<td>LARGER - SMALLER</td>
<td>.819</td>
</tr>
<tr>
<td>PEOPLE - THINGS</td>
<td>.801</td>
</tr>
</tbody>
</table>

The perceptual characteristics "Identified - Unidentified" showed the highest mean agreement score and "People - Things" showed the lowest. This indicates a possibility that either the presentation and training on perceptual factors differed (some more concise, more thorough than others) or that the inferences into different aspects of perceptual orientation (i.e., perception of self, others, etc.) are made with differing degrees of difficulty.

The third hypothesis was also developed to test the effect of the self-instructional materials. The t-test between control and SIM trained group showed a significant group difference. Thus, it appears that training with SIM has the predicted effect on inferences about perceptual orientation.

There are several reasons for caution when interpreting the results of the analysis of Hypothesis 1 and Hypothesis 3. The first is that the SIM raters may be members of a special population which differs from the total population of teacher selection officials. SIM raters were told that their inferred perceptual orientation would serve as a factor in this study. This information might have acted as a selection...
bias, with the suspected results being that officials with higher perceptual orientation were more inclined to complete all the requirements of the study. It is possible that the group receiving no training in perceptual inferences (which did not submit material for perceptual analysis) more closely resembles the real population of teacher selection officials. In this case, the primary factor determining the group difference in Hypothesis 3 could be perceptual orientation. Thus, it appears that selection of effective teachers may be a function of selection officials' perceptual orientations.

**CONCLUSIONS**

It appears that, with training, volunteer selection officials can acquire inference skills similar to the highly trained raters used in previous perceptual research. Thus, it seems reasonable to assume that volunteer teacher selection officials trained with self-instructional materials can employ the perceptual inference techniques as a useful measure in the process of selecting teachers. Apparently, the SIM training provides subjects with more explicit or uniform criteria by which to make evaluations that, traditionally, have been ignored. The implication is that, now, teacher selection officials may have the tools with which to communicate about aspects of teacher effectiveness heretofore left solely to intuition or feelings.

A second conclusion drawn from this study is that perceptual orientation has a significant effect on ability to make accurate perceptual inferences. Just as effective teaching is a function of the teachers' perceptual orientations, it appears that effective teacher selection may be a function of the perceptual orientation of selection officials.

**SUMMARY**

There is a great need in our schools for invitational teachers. These teachers have the ability to invite students to view themselves as able, valuable, and capable, and thus invite them to achieve and be successful. The major difficulty is employing more invitational teachers has been one of identifying them. Invitational teachers use no single "best" teaching method and they exhibit a wide variety of teaching behaviors.

A recent series of studies indicate that a key difference between effective and ineffective teachers is their characteristic way of perceiving (their perceptual orientation). Invitational teachers have positive perceptions about themselves and their students. By focusing on perceptual differences, the process of selecting invitational teachers can be improved. The study presented demonstrates that teacher selection officials can be trained to use perceptual data in making teacher selection decisions.
The results of this study indicate that through training with self-instructional materials, teacher selection officials could attain a high degree of inference skill. Thus, they should be able to benefit from the results of research on the perceptual orientation of effective teachers.

A second conclusion is that ability to make accurate perceptual inferences is related to perceptual orientation. It was found that selection officials who had perceptual orientations similar to those describing effective teachers had higher percent of agreement scores. Thus it appears that effective teacher selection may be a function of perceptual orientation of selection officials.

A final conclusion relates to effect of training with the self-instructional materials developed. The treatment group had significantly higher percent of agreement scores. Apparently, inference skill can be improved through training of this type.
BIBLIOGRAPHY


