This paper presents a model by which research data may be used to develop inservice programs in reading, based on teachers' needs and receptivity. An instrument was produced in which skills thought to be essential to reading instruction were described by 34 competencies. Teachers were asked to rate themselves in the teaching of reading according to their current levels of competency and their desired levels of attainment. Each of the 34 competencies was measured on four dimensions: the ability to know, to use, to diagnose, and to prescribe for both current and desired levels. Based on the responses of approximately 2000 inservice elementary school teachers, four categories of skill attainment were delineated: reading skills, basal reading skills, organizational and assessment skills, and peripheral reading skills. A scoring key then was generated by which may be assessed teachers' needs and receptivity to the teaching of various reading competencies. (Author/KS)
DEVELOPING AN INSERVICE READING PROGRAM BASED ON
TEACHERS' NEED AND RECEPTIVITY

By

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Purpose

Demonstrates a means by which research data may be used to develop inservice programs in reading based on teachers' needs and receptivity.

Methods

An instrument was developed in which skills thought to be essential to teaching reading were encompassed into 34 competencies. Teachers were asked to rate themselves in the teaching of reading in two ways: their current level on a competency and their desired level on a competency. Each of the 34 competencies were measured on four dimensions: know, use, diagnose, and prescribe for both current and desired levels.

Results and Conclusions

Factor analysis of the responses of approximately 2000 inservice, elementary teachers resulted in four nameable factors present in all four dimensions: I = Reading Skills; II = Basal Reading Skills; III = Organizational and Assessment Skills; and IV = Peripheral Reading Skills. A scoring key was then generated by which classroom teachers' "needs" and "receptivity" to various teaching of reading competencies may be assessed.
Introduction:

Since past research has clearly established the importance of the teacher variable in educating children (2,5,11,12,18), it would seem desirable to evaluate the teaching of reading competence of elementary school teachers. However, before teachers can be evaluated on the extent to which they have achieved competency in the teaching of reading, objectives concerning these competencies must be determined. A review of the literature reveals that little has been done in order to delineate the teaching of reading competencies needed (1,3,4,6,7,9,13,14,15,16,17,19,20,21,22,23,24,25,26,27). Since the purpose of a needs assessment is to provide curriculum designers with a systematic means for analyzing teaching competencies so that objectives may be identified (10), the development of a needs assessment focused upon reading teachers would seem to be the first step towards a delineation of valid objectives. Such an assessment has been constructed, administered, and analyzed at the University of Houston at Clear Lake City.

Responses were obtained from approximately 2000 inservice elementary level classroom teachers representing a cross section of rural and urban sites, an ethnic mix, and a wide strata of socio-economic levels.

Procedures:

The Needs Assessment for Reading Teachers (1974) encompasses all the skills thought to be essential to teaching reading into 34 com-
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In this self-report instrument, the teacher was asked to rate himself in the teaching of reading in two ways: his current level on a competency and his desired level on a competency. Each competency was described on a 1-4 scale with behavioral indicators for each number. The teacher was asked to place himself on one of the four positions. A response of 4 would reflect a high and a response of 1 would reflect a low familiarity with the competency. The knowledge dimension for item 18 (one fourth of the item) is illustrated below in Figure 1.

**Figure 1**

<table>
<thead>
<tr>
<th>Item</th>
<th>Current Knowledge</th>
<th>Desired Knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>18.0</td>
<td>Competence: Administers and Utilizes the Informal Reading Inventory (IRI) and the Word List Test (WLT).</td>
<td></td>
</tr>
<tr>
<td>From</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>18.1</td>
<td>I know the IRI and the WLT</td>
<td>Not familiar with how to interpret either test</td>
</tr>
<tr>
<td>18.2</td>
<td>I use the IRI and the WLT in a variety of ways</td>
<td></td>
</tr>
</tbody>
</table>

To further clarify, a sample response to all dimensions in item 18.0 is described in Figure 2. This hypothetical teacher marked the following on his answer sheet:
The response for this particular teacher might indicate that he was familiar with how to interpret both tests, but would like to be familiar with how to interpret both tests in a great many different ways (18.1); he was using the tests in a few different ways, but would like to be able to use them in a great many different ways (18.2); he was occasionally using the tests to diagnose reading levels, but would like to be able to frequently use them to diagnose both reading levels and specific reading skills (18.3); and he prescribed instruction through placing children in groups by reading levels, but would like to be able to prescribe instruction based on each child's individual reading level and skill needs (18.4).

In order to provide summary information concerning the importance of each identified reading competency to the average teacher, a frequency analysis was made of the responses of all the teachers. Though interpretation of response patterns, such as the one above, have relevance for inservice activities, the purpose of the Needs Assessment for Reading Teachers (1974) was to provide the researcher with a means for ordering teachers'
priorities in reading so that valid objectives for curriculum development could be constructed. Hence factor analysis procedures were used to isolate the major clusters of items within the instrument.

Factor Analysis Within Scales Across All 34 Competencies:

A set of factor analyses were completed for the 34 competencies within each of the four dimensions (know, use, diagnose, prescribe) for current and desired competencies. The diagram below graphically illustrates the eight factor analyses which were performed.

![Diagram showing factor analysis groups]

Items: 1, 2, ..., 34

(Note: 8 separate analysis groups; → desired know and ↔ current prescribe dimensions shown)

Results:

The results of this set of analyses reflected four nameable factors present in all four dimensions: 1 = Reading Skills; 2 = Basal Reader Skills; 3 = Organizational and Assessment Skills; and 4 = Peripheral Skills. A scoring key was then generated and "factor scores" computed in order to facilitate further interpretation.
of data, i.e. a standard T-score (Mean = 50 and Standard Deviation = 10) was computed for each score range in the distribution.

Implications and Discussion:

The standardized T-scores which were obtained permit comparisons across the various distributions allowing a means by which factor scores can be transferred to the same relative distribution. Consequently, differences in the mean responses of individual teachers or groups of teachers can be computed in order to interpret their relative strengths and weaknesses in the various dimensions (know, use, diagnose, prescribe) of the instrument. Hence curriculum directors may compare the responses of the teachers with the responses of the norm group. The factors in which the teachers perceived themselves as less competent than the norm group would seem to be valid skill areas in which to develop objectives for inservice programs.

In addition, any disparity between current and desired means on the various factors can be used as a guideline for inservice activities in terms of identifying competencies wanted or not wanted by specific schools. It would appear that (1) teachers need skills when their current scores are below the mean: (2) teachers want to learn about skills when their desired scores are higher than their current scores.

For example, school X, described below had the following T scores emerge:
The following assumptions relative to inservice activities in reading might be made:

1. **Needed and receptive = current T score below mean and below desired T score**, e.g., know and prescribe dimensions of the reading skills; all dimensions of the peripheral skills; use, diagnose, and prescribe dimensions of the organizational skills.

2. **Not needed and receptive = current T score above mean but below desired T score**, e.g., use dimensions of the basal reader skills.

3. **Needed and not receptive = current T score below mean but above desired T score**, no items in this category.
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(4) Not needed and not receptive = current T score above mean and above desired T score, e.g., diagnose dimensions of the Reading Skills; know, diagnose, and prescribe dimensions of the basal reader skills; know dimensions of the organizational skills.

(5) Needed and equal response = current T score below mean but same as desired T score, e.g., use dimension of the reading skills.

(6) Not needed and equal response = current T score above mean and the same as desired T score, no items in this category.

Teachers in school X above have indicated some need and receptivity towards the skills color coded in green. An inservice program which delineated specific objectives in reading related to these skills would probably be the most meaningful to these teachers.

Limitations:

The purpose of the needs assessment is to provide curriculum developers a systematic means for analyzing reading competencies so that valid objectives may be identified. Once objectives are defined, progress towards reaching those objectives may be assessed.

Since the objectives would be developed from data gathered from a self-report instrument, the correlation between what
Teachers say they need to teach reading and what they may actually need is not expected to be perfect. However, since the success of inservice programs are related, in part, to teacher's attitude toward learning this limitation may not detract greatly from the usefulness of the instrument in providing guidelines for developing objectives for inservice activities.


