ABSTRACT
        A study was undertaken to (1) examine the development
and construction of a Group Informal Reading Inventory to predict the
reading comprehension levels (independent, instructional, and
frustration) of junior high school bilingual students for the purpose
of reading instruction; and (2) validate the inventory through a
three-way correlational study comparing the comprehension results
with those of a cloze test, a standardized test, and a questionnaire
by which teachers estimate students' reading levels. The study
involved 50 bilingual students of predominantly English- and
Spanish-speaking, low- and middle-income backgrounds in an urban
school. All had been instructed in Spanish until they gained English
language proficiency; then they were mainstreamed into the English
curriculum. It was discovered that the students were all functioning
far below their developmental grade levels and their assigned present
grade levels, and native language grades were lower than those in
English. It is recommended that (1) a decision be made for each
individual student as to whether he should be taught in two languages
or, if his native language skills are insufficient to transfer to
English as a second language, whether he should be taught in English;
(2) testing for reading and content areas be administered regularly
to monitor progress; and (3) there be careful regulation of the
timing, techniques, content, materials, and evaluation of bilingual
instruction. (MSE)

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THE EFFECTIVENESS OF AN INFORMAL READING
INVENTORY IN IDENTIFYING THE
FUNCTIONAL READING LEVELS
OF BILINGUAL STUDENTS

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# THE EFFECTIVENESS OF AN INFORMAL READING INVENTORY
## IN IDENTIFYING THE FUNCTIONAL READING LEVELS
### OF BILINGUAL STUDENTS*

Marie Lombardo

## INTRODUCTION

The main purpose of this study is twofold:

1.  The development and construction of an original Group Informal Reading Inventory (GIRI) in predicting the comprehension reading levels (Independent, Instructional, and Frustration) of junior high bilingual students for the purpose of reading instruction.

2.  The validation of the GIRI through a three-way correlational study that will compare the comprehension results of the GIRI with those of a *Cloze Test*, a standardized test (the *Stanford Diagnostic Reading Test*, 1976), and a questionnaire in which the teachers estimate students' reading levels.

(For the data on validation of the GIRI, the reader may consult the original dissertation study.)

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*This paper is based on the author's doctoral dissertation entitled, "The Construction and Validation of the English as a Second Language Assessment Battery: The Receptive Area," Boston University, 1979.

## Justification

In recent years, it has been reported that in spite of the fact that bilingual programs do exist for bilingual students, these students are still performing below grade level (Herbert, 1977) and, consequently, many become frustrated and eventually drop out of school (United States Commission on Civil Rights, 1971). The frustration that these students encounter is based upon the fact that: (a) their reading levels are not properly assessed, their individual reading needs are not met, and as a result they are presented with materials that are too difficult for them; and (b) students are often grouped for reading according to standardized test results. These results are not accurate because standardized measures tend to overestimate the reading levels of students, thus placing these students at their frustration rather than their instructional reading level (Wiechelman, 1971; Motta et al., 1974). Also, standardized measures may not be appropriate if they were not designed for the bilingual students to be assessed:

> When standardized measures are used, results
> may be reasonably reliable and valid, but
> interpretation of the individual student's
> performance may not be possible if people
> like the student were not part of the group
> on which the test was normed. Using a stan-
> dardized test to assess reading ability for
> instance, is not appropriate when the student
> is not a native speaker of English. While
> the test might be used to compare the per-
> formance of a foreign-born bilingual with
> American monolinguals for diagnostic purpose,
> the resulting score is not a meaningful esti-
> mate of reading ability of the bilingual
> student. (Morishima and Mizokawa, 1977,
> p. 2)

Condon (1975) adamantly states that little research has been conducted in the United States relating to the influence of cultural factors on the fairness of the assessment of culturally different students.  She purports that most of the problems raised in assessment have come from bilingual or compensatory programs, which require the use of standardized tests to measure the functional progress of bilingual students.  According to Condon (1975), the problem is the contextual misconstruction of items; there is a neglect of culture, misinformation, an erroneous presentation of data, and finally bias, or the presentation of distorted impressions of the foreign culture.  As a result, bilingual students are unfairly assessed in terms of the content of these measures and the uses to which their results are applied.

Surely, the case for reading assessment instruments to be specifically designed for bilingual students is apparent.  However, to place the need for such instruments in proper perspective, the evolution of this problem in bilingual education must be presented in an historical overview.

Historically, the United States has had many changes in its language policies.  Until 1880, there was no language policy enforcing the sole use of English.  There was tolerance for the pupils' primary languages (Spanish, C    n, Portuguese, French, Dutch, and Basque).  (Anderson and Boyer, 1970)

At about 1917, with the occurrence of World War I, other languages were considered a threat to nationalism.  As a result of the war, many people from southern Europe immigrated

to the United States. During this period, states such as Connecticut and Massachusetts began enforcing the "use of English" policies and the requirement of literacy before voting (passed in 1855 and 1857, respectively). But the English-only policy, also known as the "melting pot idea," became intensified during World War II. This concept was not altered until 1954 with the *Brown v. Board of Education* Civil Rights decision, which called for equal educational opportunities for all races. The most important impact of the case was the fact that it agitated minority groups to also demand social and political opportunities. Through the 1960's evidence (Kobrick, 1972; *The Way We Go to School*, 1970) collected indicated that the traditional English monolingual educational system did not meet the needs of over 2.5 million students of language backgrounds other than English.

In 1968, the Bilingual Education Act was passed as part of ESEA. This act, later revised in 1974, stated that the educational program allow non-English-speaking children to be taught in English and the native language so as to facilitate their progression through school. Language is the key word in this act. The factor of language was further considered in court cases, whereby parents wanted to ensure that their children were taught the native lanuage before grade eight. However, it was not until the *Lau v. Nichols* (1974) case that guidelines for bilingual education were established. This case was filed in San Francisco on behalf of the 1,800 Chinese students who were not receiving appropriate language

assistance to enable them to compete on equal grounds with their English-speaking classmates. The Department of Health, Education, and Welfare declared that the recipients of federal financial aid could not "restrict an individual in any way in the enjoyment of any advantage or privilege enjoyed by others receiving any services, financial aid, or any other benefit under the program" (*Lau v. Nichols*, 1974, p. 566).

To comply with the decision of the Court, the San Francisco Unified School District, with a citizen's task force, designed guidelines for school districts to follow in the case of students "whose home language is other than English" (Office of Civil Rights, 1975). The guidelines known as the "Lau Remedies" included the identification of the student's:

1. Language dominance according to five categories:

    a. Monolingual speaker of the language other than English (speaks the language other than English exclusively).

    b. Predominantly speaks the language other than English (speaks mostly the language other than English, but speaks some English).

    c. Bilingual (speaks both the language other than English and English with equal ease).

    d. Predominantly speaks English (speaks mostly English, but some of the language other than English).

    e. Monolingual speaker of English (speaks English exclusively). (Lau Remedies, Office of Civil Rights, 1975, p. 2)

2. Frequency of use.

3. Diagnosis and prescriptive approach for proposing an educational program:

    a. At the elementary and intermediate levels the pro- program may be transitional, bilingual/bicultural, or multilingual/multicultura'.

   b.  At the secondary level the program may be bilingual,
       transitional, ESL or any of the above mentioned
       combinations.

4.  An outline of requirements of personnel teaching.

5.  A system for notifying the parents of the student's
    program.

6.  A way to evaluate the program.  (Lau Remedies, Office
    of Civil Rights, 1975, pp. 2-3).

Although these remedies were certainly a step in the right direc-
tion, the problem is that once students are selected according
to the remedies (categories a, b, or c) and placed in a pro-
gram, it is not required that their language competence in
language (listening, speaking, reading, and writing) be assessed.
However, from an educator's standpoint, it is clear that assess-
ment should be required.  More specifically, there is a pressing
need for reading instruments to be developed and validated
especially for bilingual students taking into account their
interests and backgrounds in the assessment of their functional
reading levels (levels at which each of the students can func-
tion adequately in the classroom).  As will be demonstrated,
informal reading inventories (IRI) are proposed to meet such
a need.

The need for IRI's in assessing students' functional
reading levels for the purpose of grouping and of matching
materials to students' needs in monolingual and bilingual class-
rooms has been the most urgent request of reading authorities.
Harris (1961) claimed that the use of inappropriate reading
materials was the most frequent cause of reading difficulties
faced by experienced teachers.  Dechant (1970) declared that

10-15 million children in regular classrooms attempted to read books that were too hard for them; and that the use of inappropriate textbooks interfered with reading progress.

The claim that standardized tests could give the instructional levels for individual children was disputed (Smith, 1961; Tucker, 1975). If teachers did careful readability studies of the materials to be used in the classroom and devised IRI's and administered these, they would discover the instructional reading levels of their students. They could then match materials to student levels and needs, thus making instruction more effective.

In an attempt to comply to the need for reading instruments, this study will attempt to propose and validate an original Group Informal Reading Inventory (GIRI) for bilingual students.

## REVIEW OF THE LITERATURE

In reviewing the existing literature, it is apparent that IRI's constitute a controversial issue. Researchers have focused on different aspects of IRI's and have formulated conflicting opinions on the definition, construction, administration, and scoring. But, in spite of these disputed areas, researchers are in unison regarding its purpose, need, and validity. For the purpose of this study, the areas of conflict will first be described followed by the purpose, need, and the validity of IRI's, when they are compared with the *Cloze* and standardized tests.

In identifying the first conflict area--that of defining the IRI--it is agreed by most reading authorities that IRI's are informal diagnostic measures because usually they are neither normed nor standardized (Johnson and Kress, 1965). More specificially, Johnson and Kress describe an IRI as: (a) *informal* because norms have not been established and the performance of one student is not judged against that of others, but against some standard of mastery; (b) *reading* because it evaluates the student's ability to manipulate ideas represented by words in the receptive and expressive language areas; and (c) *inventory* because it reports the students' complete comprehensive performance in reading, language, and thinking skills.

Although an IRI is defined as a non-standardized reading test through which a student's reading performance is evaluated against predetermined standards (McCracken, 1967), researchers (McCracken, 1964, 1970; Botel, 1961; Silvaroli, 1965) have developed and standardized their own IRI's by establishing the reliability and validity of their tests through various studies.

McCracken (1964) conducted a study to validate his "Standard Reading Inventory," which is based on the vocabulary of three basal readers, and tested the validity of its passages with well-known readability formulae. He then improved the content validity of the inventory by controlling the vocabulary, sentence length, content, and style of the reading selections and obtained norming data by administering these oral reading selections to 664 students in grades 1-6. The significant differences found in student performance as para-

graphs increased in difficulty was quite substantial. Since there were alternate forms of the inventory, reliability was obtained by having two examiners administer each form to 60 elementary school children. Reliability correlations between the two forms (for the Independent, Instructional, and Frustration Reading Levels) ranged from .86 to .91. The correlations between the two forms for the eight reading sub-skills measured by the inventory ranged from .68 for Word Recognition errors to .99 for Vocabulary in isolation. It was determined by the results of this study that the "Stanford Reading Inventory" reliably estimates students' functional reading levels.

Botel (1961) cross-validated his reading test and readability measures through the use of correlational and matching procedures. The correlations among all the tests and readability measures were unusually high for both McCracken's and Botel's tests. In a later study, McCracken and Mullen (1970), further validated the IRI's by compiling the data from the administration of the "Standard Reading Inventory" (SRI), the "Botel Inventory," and the *Stanford Achievement Tests* to 171 male and female students from grades 1-6. Results indicated that there was concurrent validity between the mean levels of the *Stanford Achievement Tests* and the instructional levels obtained from the SRI and the Botel Inventory. The data also confirmed that the instructional reading levels can be measured validly.

Most researchers, however, have not advocated standardization of IRI's. In addition to the explanation of IRI, it

is necessary to delineate its purpose, which is three-fold:
(a) to assess the student's functional level and the student's
strengths and weaknesses for purposes of instruction (Johnson
and Kress, 1965); (b) to estimate the independent, instructional,
and frustration reading level for each student so that reading
materials can b matched accordingly (Betts, 1957; Botel, 1969;
Beldin, 1970; Ipay, 1964; Kehder, 1968); and (c) to serve as
a placement instrument in grouping students according to their
appropriate r ading levels (Walter, 1974; Betts, 1940; McCracken,
1967). Both Walter (1974) and Pilulski (1974) claim that there
is no need to standardize IRI's since there is face validity
in IRI's when their passages and questions are sampled from the
materials used, or be to used, in the classroom.

In addressing the second area of conflict--construction of
IRI's--reading authorities have been divided in their opinions;
some have utilized and advocated the use of classroom materials,
others have created their own reading selections for IRI's.
Motta et al. (1974) advocate that in preparing IRI's, the
materials to be used in the curriculum should be utilized.
They warn that in selecting these materials, one should take
into account the elements of interest, culture, and language
structure in dealing with non-native speakers. They especially
emphasize that an analysis of semantics, lexicons, and syn-
tactical structure should be conducted in order to ensure the
appropriateness of these materials for non-native speakers.

On the other hand, researchers--McCracken (1964), Botel
(1961), and O'Brien (1970)--have reviewed basal readers and

found it most feasible to create original IRI's based on their subjects' interests. Otto *et al.*(1973), also agreed that an IRI does not have to be constructed from the basal reader series for students of the upper elementary and secondary levels.

O'Brien (1970) conducted a study to confirm that her original IRI's were more effective than those whose passages were directly extracted from classroom basal readers. She studied traditional IRI's and suggested a new method for devising them in which words are tak from basal readers and incorporated into an original paragraph. To discover the usefulness of this procedure, a traditional IRI and one based on the new method were administered to a group of second and fourth graders. The results indicated that the new IRI's: (a) presented fewer words per selection, (b) presented more new words in each selection, (c) required fewer selections to be read, and (d) gave an instructional level score (in ten cases) lower than did the traditional IRI.

Once the context for the IRI has been selected, the next consideration is the type of IRI to be constructed. Types vary from those based on graded word lists (Silvaroli, 1965; Motta *et al.*, 1974) to a series of passages and corresponding comprehension questions (McCracken, 1964; Botel, 1961, Silvaroli, 1965). Based on research and sensitivity to bilingual students' needs, the researcher decided to create original stories for the purpose of the study. The advantages of the stories are:

1. Context was provided to facilitate reading. Thonis (1976) contends that it is simpler for speakers of other languages to read vocabulary that represents content.

2. Original themes were employed to motivate and interest the non-native speakers.

3. Lexicon (vocabulary), semantics (meaning), and syntax (grammatical structures) were manipulated and adjusted for these students.

4. Dialogue was used as context in the stories so that students could be presented with a natural transition from oral to written language (Ruddell, 1965).

When one wishes to construct the story type of IRI, Otto et al. (1973) recommend the following passage lengths: (a) passages of 30-100 words followed by five comprehension questions for the primer level, (b) passages of 150 words followed by six comprehension questions for second and third grade levels, and (c) passages of 150 words followed by eight comprehension questions for levels above fourth grade. The reason that passages are increased in length are that students of limited-English-speaking ability should not be frustrated by long selection. However, longer passages are needed to facilitate the construction of higher level questions. For the purpose of this study, the story type of IRI was constructed. The number of words for the passages and the number of comprehension questions were increased at each level because the GIRI was intended for secondary school students.

After the passages have been constructed, readability indices are computed for each passage. Measures of readability range from the Spache (1953), which is intended for the third grade level and below; the Dale and Chall (1948), which presupposes a reading level of fourth grade; the Flesch (1948), intended for grades 4-16; the Fry (1968) for grades 1-13; and the Smog (cited in Vaughan, 1976) for grades one through college. Pauk (cited in Vaughan, 1976) tested the Smog, Dale-Chall, and Fry readabilities on the same passages of 20 articles and found that: (a) the Dale-Chall and Fry scores were in agreement, (ɔ) the Smog scores disagreed with the Fry and Dale-Chall, and (c) the Smog scores tended to be two grade levels above the Dale-Chall and Fry in estimating the grade levels of the passages. Based on these conclusions, the researcher decided to use the Fry for the primer to fourth grade passages, and the Dale-Chall for passages above the fourth grade level. The rationale for including passages as low as the primer level was to help the bilingual student meet with initial success. Thonis (1976) indicated that pupils who have limited-English-speaking abilities need materials with a lower readability rating (about two to three years) below that of English speakers.

Once the grade level of each passage has been determined, comprehension questions are prepared. The questions deal with the cognitive and affective domains so that the students' knowledge and personalized perspective based on their individual experiences is examined. For each passage: (a) questions

dealing with the cognitive domain were hierarchically arranged from literal to synthesis levels of comprehension, according to Bloom (1956) and Barret's (cited in Lapp and Ramsey, 1976) taxonomies; and (b) questions dealing with the affective domain ranged from simple awareness of situations to the complex determination of one's *own* values and philosophy of life, according to Krathwohl's *et al.* taxonomy (1964).

The questions were constructed according to Lindvall's (1967) model of Bloom's Taxonomy, which delineates the testing objectives and the most expedient way to elicit responses. The model outlines and examines the levels as follows:

1. The knowledge level deals with the student's ability to recall terms, facts, rules, principles, and other generalizations. The testing objectives are for the student to be able to name, list, state, describe, and define material presented.

2. The comprehension level is concerned with the pupil's ability to understand a given content, put it in the pupil's own words, summarize it, and explain it. The testing objectives are for the student to be able to translate, give examples, illustrate, interpret, summarize, and explain given materials.

3. At the application level, the focus is on the student's ability to use rules, methods, procedures, principles, and other types of generalization to produce or explain given consequences or to predict the results of a given situation. The testing objectives are to be able to solve, predict, develop, explain, and apply knowledge in a given situation.

4. At the synthesis level, the pupil's ability to develop, create, or produce something is tested. Specific testing objectives are to develop a plan, write a paper, produce, create, or demonstrate a particular work (Lindvall, 1967, pp. 19-20).

For the intensive purpose of this study and fulfillment of the testing objectives at each level of cognition, multiple-choice items were constructed for the following reasons: (a) to provide a stimulus in order to evoke recall, (b) to facilitate testing since it is easier for non-native speakers of English to recognize and identify rather than retrieve information, (c) to evaluate a greater variety of abilities, (d) to reduce guessing by providing several alternatives (Lindvall, 1967), and (e) to provide an objective method of scoring, a notion supported by Lowell (1969) who advocated that more attention should be given to identifying reading performance in ways that do not rely upon the examiner's judgement.

Once the IRI has been constructed, the third area of conflict to be examined is that of administering the IRI. The issues involved are: (a) the technique to be adopted--whether students are to read the passages orally, silently, or listen to the teacher read then and then respond to comprehension questions; (b) the procedure for administration--whether the test is to be individual or in group; and (c) the choice of the examiner to administer IRI.

In addressing the problem of the technique for administering the IRI, it seems that researchers (Burmeister, 1974; Lowell, 1969; Dunkeld, 1970) were in unison that the value of employing

oral IRI technique above sixth grade is questionable. Dunkeld (1970) strongly contended that comprehension rather than word recognition scores obtained from oral reading seemed to be more valid indicators of passage difficulty above the fifth grade level. Furthermore, the technique of reading IRI's orally has not been supported in literature for several reasons. There is a lack of uniformity among examiners as to whether passages should be read aloud or silently first; the problem is obvious, students reading the passages silently first would, of course, perform better. Also, the true word recognition score is not accurately identified after the student has read several passages orally. Dunkeld (1970) conducted a study and found that with the practice of reading several passages, student's word recognition scores increased. The problem is evident here; one examiner could choose the initial word recognition scores as indicators of the student's reading levels and another may assume the latter scores to be indicators of the student's reading levels.

Along with the method of administering the oral IRI, the major controversy centers around the criteria for scoring oral reading errors. There is agreement on the behavioral characteristics to be considered, but there is disagreement as to. the definition of an oral reading error (Wilson, 1972).

The behavioral characteristics are listed as mispronunciations, substitutions, omissions, insertions, regressions, hesitations, and punctuation (Johnson and Kress, 1965; Burmeister, 1974; McCracken, 1967). However, the meaning of these terms

varies from one examiner to the other. Because of this lack of agreement, both early and contemporary reading experts have placed less significance on reading errors as determiners of the students' reading levels.

Early researcher (Betts, 1936) believed that the student could have faulty oral reading and still achieve comprehension. Later researcher (Powell, 1971) also found that errors in oral reading did not always affect comprehension. He studied the congruent validity of the Betts (1940) formula as far as the Word Recognition area was concerned, presuming the Comprehension Score of 70-75%. Powell (1969) argued that in spite of the fact that examiners used the same formula, discrepancies still arose. The problem was the procedural differences of examiners. Some examiners allowed students to read passages silently before reading them aloud, some had the students read only orally, others counted repetitions as errors.

Powell (1969) went further to say that if the Comprehension Level of 70-75% remained, the student could tolerate whatever Word Recognition Errors that accompanied that performance level. He found that younger children could tolerate more Word Recognition Errors than older children and still maintain the same level of comprehension. This would be true especially for non-English speakers; they could make numerous Word Recognition Errors--especially mispronunciations--and come out with a low Word Recognition Score; yet their comprehension could remain the same throughout different levels.

Powell (1971) further studied oral reading by analyzing five tests: *Spache Diagnostic Reading Scales*, *Durrell Analysis of Reading Difficulty*, the *Gilmore Oral Reading Test*, the *Gray Oral Reading Test*, and the *Gates McKillop Reading Diagnostic Test*. Two IRI's were also studied: McCracken's "Standard Reading Inventory" and Silvaroli's "Classroom Reading Inventory." Each test was analyzed for: (a) the number of words to be read in each passage (a count was made); (b) the maximum number of errors allowable for that passage to be regarded within limits of acceptable reading behavior from a given norm; and (c) Word Recognition, which was computed for each passage by dividing the number of words to be used by the number of errors allowable. The results were as follows: (a) all Word Recognition error ratios increased in error latitude as the difficulty of the materials increased and the age-grade of the sample increased; (b) one error in every 20 words (95% Word Recognition Accuracy) for determining Instructional Level is hardly justified because in an earlier study, Powell (1969) had discovered that some students could tolerate more oral reading errors than others and still comprehend.

More recently, researchers (Goodman and Burke, 1972) from a linguistic background, have questioned the rating or oral reading errors on IRI's. They have considered examining oral reading miscues on the basis of semantic, lexical, or syntactical errors. They present a more general schemata of reading miscue errors, which are based on dialect, intonation, graphic similarity, sound similarity, grammatical function, correction,

grammatical acceptability, semantic acceptability, and meaning change. Although this model of scoring oral reading has been criticized, it would seem to be more acceptable in purposefully identifying oral reading errors, especially for bilingual students; but for the purpose of this study, Goodman's Miscue Analysis (1972) was not used.

Since the concern of the researcher was to define reading in terms of comprehension, oral reading did not seem appropriate for ascertaining the bilingual student's comprehension level. For the purpose of this study, silent reading was deemed appropriate because the student would not be punished for pronunciation and accent. The student would be comfortable and would not feel embarrassed as in the case of oral reading, which many researchers (Otto et al., 1973; Lowell, 1969; Roswell and Natchez, 1964) have viewed as a trying task for some students. Students usually concentrate intensively on the decoding task and neglect comprehension. As a result, it would then be unfair to estimate their comprehension based on oral reading.

In administering the .RI, it was decided to allow students to ready silently without a time limit per passage, although a time limit of the testing session was established. It was hoped that through a general time limit, the examiner could determine which students needed training for speed. It was also hoped that administration of the silent reading IRI would determine: (a) which students needed work in grasping the meaning of written materials (Bolenius, 1919); (b) the comprehension problems students were encountering; (c) the strengths

and weaknesses in the student's ability to follow directions,
to read for understanding, and to use context (Dechant, 1970;
Wilson, 1972); (d) specific skills in finding the main idea,
character analysis, sequencing of details, making inferences,
drawing conclusions, cause and effect, and higher-level ques-
tions asking the student to apply concepts to himself/herself
(Valmont, 1972).

Asking the bilingual student, or any student for that matter,
to apply concepts to his/her own experience helps make reading a
more relevant experience.  In fact, Knowles (1975) states that as
a person grows, the concept of himself/herself moves from dependency
to self-directedness.  This self-direction is accompanied by a
wealth of experience that can be a rich resource for learning
and a readiness to learn, particularly those things that will
help the student directly in daily problems.

The comprehension questions in the stories ask the student
to relate original themes to his/her own life experience.  This
should not only facilitate the testing of comprehension, but
should also provide the student with a positive attitude toward
reading--the ultimate goal of reading.

Another facet of IRI's that has been controversial is the
Word Recognition and Comprehension Scoring criteria to be used
in determining the three functional reading levels:  (a) Inde-
pendent Level, (b) Instructional Level, and (c) Frustration
Level.  In studies since the 1940's, various criteria have
been proposed for both word recognition and comprehension.

Early research in creating criteria for scoring IRI's was
initiated by Killgallon and Betts (cited in Walter, 1974). Since
Killgallon had worked closely with Betts at the Pennsylvania Uni-
versity Reading Clinic, the scoring criteria developed became
known as the "Betts-Killgallon Criteria." The exact research
base for the development of the criteria is not very well known,
and for this reason they have been criticized. However, the cri-
teria has generally remained applicable for IRI's.

Beldin (1970) suggested that the criteria was not arbitrarily
established but was derived from a requirement of 50% comprehen-
sion for the understanding of material (Bolenius, 1919), and
that for the student to read with meaning, he/she should not
have more than one difficult word in 20 continuous words (Durrell,
1956). The Betts-Killgallon Criteria, which has been applied in
most texts discussing IRI's, provides a Basal Reading Level of
90%, a Probable Instructional Level derived by a minimum compre-
hension score of 50%, a Probable Reading Capacity Level of 75%,
and a Probable Frustration Reading Level attained by a compre-
hension score of 20% or lower.

Cooper (cited in Beldin, 1970) conducted a study with stu-
dents of grades 1-6 to determine the relationship between the
relevance of using symptoms of reading problems, demonstrated
with certain materials, as a basis for predicting suitability
of reading materials for the purpose of instruction; and to de-
velop criteria that could be used to estimate the level of
reading materials. Cooper used standardized tests and an IRI
at the beginning. At the end of his six-month experimental

period he found that: (a) students who had made the most progress
were those who had two or less errors in 100 running words of
reading matter; (b) this group of students had been placed in
appropriate instructional materials; and (c) primary students
who made seven or more errors in 100 running words, and at the
intermediate level, students who made 11 or more errors in 100
running words were placed in materials that were not suitable for
their instruction. Therefore, Cooper set Comprehension Level
Scores at 70% for primary and 60% for intermediate level stu-
dents.

McCracken (1967) provided detailed criteria for counting
Word Recognition errors, and he redefined the criterion levels
as: (a) Independent Level, when the score of every passage has
been rated as Independent Level; (b) Instructional Level, when
half of the scores fall below the questionable half of the In-
structional Level; and (c) Frustration Level, when the scores
of one passage is rated at the Frustration Level. The percen-
tages proposed for Word Recognition are: (a) Independent
Level: 99-100%, (b) Instructional Level: 95-98%, and (c)
Frustration Level: 94% or less. For Comprehension, the scores
are: (a) Independent Level: 90-100%, (b) Instructional Level:
51-89%, and (c) Frustration Level: 50% or less.

Kender (1968) compared the results of three instructional
reading levels designated by three IRI's using three different
criterion measures. The results of the three IRI's revealed
significant differences among the means of a group of eighth-
grade students. It seemed that a discrepancy among test re-

24

sults would have been obvious is tests, calculation of errors, scores, and criteria were all compared. However, among the IRI's in this study, too many factors were being considred to make valid conclusions about them.

Powell (1969) disputed the Betts-Killgallon Criteria for scoring IRI's and said it was too high. He maintained through his own studies that pupils in grades one and two could tolerate an 85% Word Recognition Score and still comprehend 70% of the material; and students in grades three through six could attain a 91-94% score on Word Recognition, and comprehend 70% of the material at the same time.

Ekwall et al. (1973) conducted a study using a polygraph to validate the criteria for scoring IRI's. Their scope was to see if one set of criteria was more applicable to students of various mental ages, sexes, ethnic backgrounds, reading levels, and personality. To execute the study, they sampled 150 students of the third, fourth, and fifth grades. The students were administered an IRI individually, and they were monitored and taped by the polygraph to note their behavior during oral reading and responding to comprehension questions. Results were analyzed, and it was found that: (a) there was a significant difference in polygraph-measured frustration reading levels for third, fourth, and fifth graders; (b) there was no significant difference in polygraph-measured frustration reading levels between boys and girls; (c) there was no significant difference in polygraph-measured frustration reading levels among ethnic groups; (d) a comprehension criterion of

50% was adequate; (e) good readers become frustrated with fewer oral reading and comprehension errors than poor readers. In conclusion, Ekwall *et al*. did support Bett's Criteria for determining the Frustration Level of their students.

In light of all the studies on scoring IRI's, for the purpose of this study the researcher has set the criteria of: (a) 90-100% for the Independent Level; (b) 75-89% for the Instructional Level; and (c) 0-74% for the Frustration Level in determining the comprehension levels of bilingual students. Motta *et al*. (1974) employed a similar criteria for their non-English speakers.

Another problematic area to be addressed is who is qualified to administer IRI's? The philosophy of IRI's contend that the IRI can best be utilized by the classroom teacher. However, research has indicated that classroom teachers need training in construction, administration, and scoring of IRI's in order to effectively utilize them in the classroom. Perhaps teachers who are intimidated by their inadequate knowledge in readability, reading skills, taxonomies, methods of assessment, as well as prescription of remediation for students, are hesitant about employing IRI's in the classroom to: (a) match reading materials to their students' levels, (b) diagnose students' reading strengths and weaknesses, and (c) group students for reading instruction.

The following studies reported data on the teacher as the crucial factor in diagnosis, and the effectiveness of teachers before and after receiving training in administering IRI's. Sipay (cited in Durkin, 1970) reported that one consistent

finding from research is that the teacher is the crucial factor when student's achievement in reading is concerned. Durkin (1970) contended that research findings do not place enough emphasis on the teacher factor, and do not closely speculate what makes a successful or unsuccessful teacher. She questioned diagnosing reading levels until the teacher's knowledge of reading skills has been affirmed because the success or failure of diagnosis and interpretation of results for grouping and instructing students is dependent upon the teacher's knowledge. Farr (1970) claimed that the validity of the IRI is highly dependent upon the ability of its instructor and administrator.

Negative results have been reported with respect to teachers' ability to diagnose reading abilities before formal training. Emans (cited in Lowell, 1969) conducted a study rating 20 teachers in a graduate remedial reading course on their ability to distinguish reading skills needed by their pupils, whom they tutored one hour per day for five weeks. He found that the teachers had preconceived notions as to what skills the students needed, and were not perceptive nor accurate in their diagnosis of students' abilities.

Mills (cited in Lowell, 1969) reported that experienced classroom teachers were not aware of the frustration reading levels among their students when they were asked to estimate the frustration levels by using IRI techniques.

In order to determine whether teachers who had limited training in administering and scoring IRI's could assign appropriate instructional levels to students as accurately as clini-

cians, Blynn (1970) designed a correlational study. She had
alternate forms of the "Standard Reading Inventory," Forms A
and B administered to 30 students by three pairs of teachers
and clinicians. Her findings indicated that differences in
reader levels between pairs of examiners existed in 24 out of
30 cases. This supported that fact that classroom teachers
need training in administering and scoring IRI's for assigning
appropriate instructional levels to their students in grouping
them for reading or meeting the students' instructional needs.

On the other hand, the ollowing studies presented posi-
tive results in that teachers who were trained were able to
effectively utilize IRI's. Kelly (1969) conducted the Berea,
Ohio In-service Educational Experiment to investigate the im-
portance of training teachers for the purpose of discovering
the relative effectiveness of an adopted model of the IRI In-
structional Process as a means of helping teachers become more
cognizant of instructional reading levels in the classroom,
and whether the time of the school year when the teacher par-
ticipated in the in-service made a difference in the teacher's
awareness of the instructional reading levels of students in
the classroom. The results were:

1.  In terms of evaluative basal reading materials, teachers
    who participated in simulation type in-service programs
    early in the school year were more aware of the instruc-
    tional reading levels of students in the classroom.

2.  There was a considerable difference between the teachers
    who had participated in the simulation in-service pro-

gram later in the year and teachers who did not parti-
cipate at all.

3. Teachers who participated in the in-service program
early in the year were significantly more aware of in-
structional reading levels than teachers who did not
participate.

4. Primary school teachers were more aware of instructional
reading levels in classrooms than intermediate school
teachers (Kelly, 1969, p. 7).

The reason was that elementary teachers, in contrast to
intermediate teachers, have to teach reading and are aware of
the process. Nonetheless, the implication here is obvious:
teachers do need training in preparing, administering, and in-
terpreting IRI's; but most important, they need some background
in the teaching of reading.

Ladd (cited in Lowell, 1969) re-affirmed that teachers need
training in reading instruction through a study that found that
after 30 hours of intensive training, teachers were able to eval-
uate the reading performance of students accurately.

For the purpose of this study, to ensure that classroom
teachers of bilingual students effectively used the GIRI, a
teacher-training workshop was conducted. The focus of the work-
shop was the reading process for bilinguals as well as adminis-
tering, scoring IRI's, and prescribing remediation.

While literature dealing with the relationship of the IRI
and *cloze* tests used with English speakers is limited, litera-
ture dealing with the same relationship with non-native speakers

is practically non-existent. Research has reported that cloze tests can be used as substitutes or partial substitutes for the IRI (Burmeister, 1974). This concept was elaborated by Bormuth (1967) who also found that the comprehension scores of IRI's and cloze tests correlated significantly for English speakers. Similar research for non-English speakers was not found. However, it was reported that the IRI was effective in determining reading levels of non-native speakers (Motta et al., 1974) and the cloze Test was an effective measure for determining the comprehension levels of non-native speakers (Jongsma, 1971; Aitken, 1977; Oller and Conrad, 1971; Oller, 1972; Stubbs and Tucker, 1974). This led the researcher to hypothesize that perhaps the comprehension scores of IRI's and cloze tests would correlate for non-native speakers. This hypothesis was based on Bormuth's study (1967), which will be discussed along with other studies reporting on the relationship of IRI and cloze tests.

Bormuth (1967), the reading expert widely identified with cloze procedures, conducted three studies based on Taylor's work (1953). Bormuth's first study examined the relationship of comprehension scores for multiple-choice and cloze tests, constructed for each of his nine passages. The cloze Test was given and within three days the multiple-choice tests were administered to 100 fourth and fifth graders. The reason for this time lapse is that the same passages were used for the multiple choice and cloze tests. When scores were collected and compiled, a significant correlation was found between scores on the cloze and the multiple-choice tests.

For the purpose of this study, the Bormuth study was replicated. An original IRI consisting of eight passages was prepared. From the GIRI stories, a *cloze* test and a multiple-choice test were prepared for each of the eight passages.

In another study, Bormuth (1969) attempted to examine factors in the validity of the *cloze* test as a measure of reading comprehension. A series of passages were leveled according to the Dale-Chall's Readability Formula, and a *cloze* test and multiple-choice IRI were constructed for each passage. The tests were administered to 150 fourth, fifth, and sixth graders. Only the exact words omitted were accepted as correct on the *Cloze Test*. Conclusive results indicated that there was a high correlation between scores on the multiple choice and the *Cloze Test*.

Bormuth (1968) conducted another study to determine a set of criterion scores for *cloze* readability tests that would be comparable to the criterion scores used with oral reading tests to determine the readability of passages, and to further substantiate that *cloze* tests are measu..s of comprehension. He tested 120 pupils of grades four, five, and six, using four forms of the *Gray Oral Reading Test* (Robinson and Gray, 1963), each containing passages leveled from primer to high school level. He also administered two *cloze* tests. Each student was administered two *cloze* tests and an oral reading test, which tested word recognition and comprehension. The *cloze* test scores correlated highly with the comprehension scores of the oral test. Comparable criteria were determined with *cloze*

scores of 44% and 57% corresponding with comprehension criterion scores of 75-90%; and Cloze scores of 33-54% corresponding with word recognition scores of 95-98%.

Other evidence also indicates that there is a correlation between the Cloze Test and the IRI (Wiechelman, 1971). Wiechelman conducted a study comparing the functional reading levels identified with a Cloze Test and the functional reading levels identified with an IRI for 71 eighth-grade students, of which 13 were Spanish-surnamed. The conclusions indicated that there was a positive relationship between the functional reading levels identified by the Cloze Test and by the IRI. It was found that the mean functional reading levels through the use of the Cloze Test for these students did estimate their mean functional reading levels as reported by the IRI. Also, the mean instructional reading levels from the Cloze Test for Spanish-surnamed students did approximate their mean instructional reading levels on the IRI. Finally, when the instructional levels of the IRI and cloze tests were compared with the Durrell Listening Reading Test, results indicated that the IRI and Cloze tests were more accurate in identifying the reading levels.

To demonstrate the effectiveness of the Cloze Test with non-native speakers, Oller and Conrad (1971) constructed a Cloze Test and administered it to 102 foreign students entering UCLA. Only the exact words omitted were counted as correct in the scoring. The students were also administered the UCLA English as a Second Language Placement Examination (ESLPE) as a basis of comparison with the Cloze Test. The researchers found the highest corre-

lation between the *Cloze Test* and the *Dictation* sub-test (which measured listening comprehension), and the next highest correlation between the *Cloze Test* and reading. These correlations led the researchers to recommend the *Cloze Test* as a good method for measuring language proficiency and comprehension levels, which can be used in placing non-native English speakers in English and reading classes.

Research on the IRI's has also focused on the relationship between scores on IRI's and on standardized reading tests. It has been generally discovered that standardized reading tests tend to overestimate the students' functional reading levels, and IRI's are more accurate measures for placing students at their appropriate reading levels.

Betts (1940) attempted to study the accuracy of standardized measures as compared to informal procedures for assessing reading grade placement. He administered five silent reading tests: the *Gates Reading Survey*, the *Stanford Achievement Test*, the *Durrell-Sullivan Reading Achievement Test*, the *Sangren-Woody Reading Test*, and the *Iowa Silent Reading Test--Advanced*. These were used to test fifth graders, and their scores were compared with the scores on the author's constructed IRI. Generally, Betts found the IRI to be a more accurate measure of reading levels.

Sipay (1964) studied the levels of reading achievement as measured by standardized reading tests and those levels determined by an IRI. He administered three standardized tests and two parallel forms of an IRI, and concluded that the three stan-

dardized tests tended to overestimate the instructional level
of students one or more grade levels.  Only two of the stan-
dardized tests, the *Metropolitan Reading Test* and the *Gates
Reading Survey*, appeared to indicate the instructional reading
levels when a more stringent criterion was applied.

McCracken (1962) has recommended the use of IRI's rather
than standardized group reading tests for the purpose of ob-
taining instructional reading levels.  He compared the perfor-
mance of 56 sixth-grade pupils on the *Iowa Every-Pupil Test of
Basic Skills, Test A:  Silent Reading Comprehension* to the
reading comprehension and vocabulary scores on an IRI, which
included oral and silent reading.  The three levels of perfor-
mance on the IRI were the Immediate Instructional Reading Level,
the Maximum Instructional Reading Level, and the Word Recogni-
tion Level.  Results indicated that the average difference be-
tweeen the *Iowa Reading Comprehension* grade levels and those
estimated by the IRI was 2.3 years.  The difference for the
Vocabulary Grade Score was one year, and was higher for the
*Iowa Test*.  McCracken (1962) concluded that the use of the
standardized test scores to determine the level of instruction
would place 63% of the students at a Frustration Reading Level.
He suggested that the instructional level be two grades below
the standardized test scores.  McCracken's suggestion has validity
only for the *Iowa Every-Pupil Test of Basic Skills*, which he
used in his study, and the reading materials that formed the
basis of his IRI.

Williams (cited in McCracken, 1962) compared the performance of fourth, fifth, and sixth graders on an IRI based on their classroom basal readers with their scores on the *California Reading Test*, the *Gates Reading Survey*, and the *Metropolitan Achievement Reading Tests: Reading*. When an IRI, containing selections from basal readers which the students were familiar with, was used, the standardized tests were found to place students relatively near their instructional levels.

Brown (1963) designed a study to determine if a difference existed in the instructional reading levels as indicated by an IRI and the grade placement reading scores of five standardized reading tests. She administered the *California Reading Test*, the *Metropolitan Reading Test*, the *Stanford Reading Test*, the *Iowa Test of Basic Skills*, the *Gates Reading Test*, and an IRI to 192 elementary school children. After all the tests were administered, a second IRI was given to 49 of the students for the purpose of establishing the reliability of the IRI. When teachers were asked to estimate students' reading levels, it was found that their prediction correlated only with the IRI. Finally, results on the two IRI's correlated highly; and no significant difference was found between pupils' scores on the two forms.

Sipay (1964) attempted to obtain evidence on the extent to which the level of reading achievement, as measured by standardized reading achievement test scores, differed from functional reading levels, as estimated by an author-constructed IRI. He administered the *Metropolitan Achievement Test: Reading*,

the *Gates Reading Survey*, and the *California Reading Test* to 202
subjects from 8 fourth-grade classes.  The students were given
individually administered IRI's, which were based on selections
from the Scott Foresman Reading Series.  The criteria for deter-
mining the functional reading levels were as follows: for the
Instructional Level:  Cooper Criteria--96% with Word Pronuncia-
tion 96-99%, and Comprehension--minimum 60%; for the Betts Cri-
teria--90% with Word Pronunciation 90-95%; and Comprehension--
minimum 60%; for the Frustration Level:  Word Pronunciation less
than 90%, and Comprehension--minimum of 50% or less.  The sta-
tistical analysis of the test scores indicated that:

1.  In estimating with the Cooper Criteria, the Instructional
    Level indicated by all three standardized tests tended
    to overestimate the instructional level by approximately
    one or more grades.

2.  When the Betts Criteria were used, the mean score of the
    *Metropolitan Test* was .11 grade levels higher, while
    the *Gates Reading Survey* overestimated the Betts Cri-
    teria Instructional Level by .29 of the grade level,
    and the mean of the *California Reading Test* was 1.02
    higher than that of the Betts Criteria Instructional
    Level.

3.  The standardized tests, when compared with Frustration
    Level Criteria, were significantly lower in the case
    of the *Metropolitan* and *Gates* tests.

4.  A comparison of the means of the Frustration Level and
    the *California Test* revealed that the *California Reading*

*Survey* underestimated the Frustration Level by .24 of the grade level. These differences were significant at the .05 level.

In conclusion, Sipay (1964) stated that these findings suggest that is is impossible to generalize as to whether standardized reading achievement test scores tend to indicate the Instructional or Frustration levels; rather, it appears that in making such a judgment one must consider the standardized reading test used and the criteria employed to estimate the functional reading levels.

In a study of the relationship of pupils' scores from IRI's and standardized tests, Glaser (cited in McCracken, 1962) compared the functional reading levels of retarded seventh grade and advanced third-grade students to their scores on the *Gates Reading Survey*. All the students in both groups had scored between 5.0 and 5.9 on the *Gates Reading Survey*. The result was that standardized reading tests tended to overestimate reading levels. The findings of this survey were:

1.  The Instructional Levels of the advanced and retarded readers were consistently lower than the levels of their standardized reading test scores with a slightly larger spread evident for retarded readers.

2.  Sixteen (52%) of the retarded seventh-grade readers reached Frustration Level in passages of fifth grade difficulty. Seventeen (50%) of the third-grade pupils met the criteria for Frustration at this level.

3. The Instructional Levels were consistently below the standardized reading test scores for the two groups.

4. Providing reading instruction and materials for students on the basis of standardized reading test scores could hinder their progress and possibly affect their attitude toward reading.

Leibert (cited in McCracken, 1962) compared the scores of IRI's and the *Gates Advanced Primary Reading Test* for second graders. Leibert reported differences in grade placement for the two measures but suggested that these differences may be due to the wider range of skills included in a group standardized test, while reading as measured by the IRI is more narrowly defined.

Patty (1965) contrasted scores on the *Gilmore Oral Reading Test* and the *Gray Oral Reading Test* with the IRI performance. Patty found that it was impossible to generalize as to whether standardized oral reading tests indicate the functional reading levels of children as accurately as IRI's do. Because of the economy of administration and the usefulness of the information they provided, the *Gray Oral Reading Test* and the IRI were deemed the most desirable instruments for determining functional reading levels.

Brown (1963) came to a similar conclusion in a study using the following silent reading tests: the *California Reading Test*, the *Metropolitan Achievement Test: Reading*, the *Stanford Achievement Test: Reading*, the *Iowa Every-Pupil Test of Basic Skills*, and the *Gates Reading Survey*. Brown found no consistent relation-

ship between performance on these tests and on informal inventories. The Brown and Patty studies are not directly comparable; Brown used standardized silent reading tests, while Patty used standardized oral reading tests.

Botel (1969) confirmed that standardized reading tests have not been accurate in indicating at what level the student should be reading. As a result, 10 to 15 million students in United States schools are reading books that are beyond their instructional levels. Botel (1961) explained that he and other reading authorities agreed that the reading of children forced to read books that are too difficult for them is affected negatively.

Farr (1969) contended that standardized test scores were almost useless for the diagnosis of students' instructional reading levels in the classroom. More specifically, Burmeister (1974) asserted that standardized silent reading tests have little diagnostic value because only a limited number of any one type of items were included in any one form of these tests; hence, they provided the teacher only with a grade or pencentile score that ranks students according to norms for a given population. The scores obtained from these silent reading tests by students above the primary grades tended to overestimate reading levels and place students at their frustration levels. A teacher has to judiciously subtract a year from each student's total score to estimate the student's instructional levels and two years to estimate the student's independent level.

Smith (1970) compared the results for fourth-, fifth-, and sixth-grade subjects from the administration of the Vocabu-

lary and Comprehension sub-tests of the *Gates MacGinitie Reading Tests, Survey D*, The Vocabulary Reading and Paragraph Reading sub-tests of the *Durrell Listening and Reading Series, Intermediate Level* with those of an IRI. The findings demonstrated that for all three grade levels there were no statistically significant differences between the mean grade scores obtained from the standardized tests and the mean instructional reading levels obtained from the IRI. However, the *Gates MacGinitie* and *Durrell* tests placed more than one-half and one-third of the subjects, respectively, from one to five years above their actual instructional reading levels. Neither the sub-tests nor the total score from the two standardized tests was accurate in estimating the students' instructional reading levels for pupils of grades four, five, and six.

A study was conducted by Feldman *et al.* (1971) to find if results from different measures could be used for various purposes, such as placing the students in groups, or for selecting appropriate reading material according to their reading levels. They tested 96 children of grades one to three with two standardized measures: the *New York Growth in Reading*, the *Metropolitan Achievement Test*, and two non-standardized tests--the "Harris Sample Graded Word List," and "Graded Basal Readers Test" used in the students' reading program. The results indicated that the students' scores were higher on the standardized tests, which tended to overestimate their functional reading levels in the classroom; and the IRI's seemed better suited for measuring the instructional reading levels in the classroom.

40

The four tests appeared to measure different skills; the non-standardized measures tested specific sight vocabulary, while the standardized tests measured global reading skills.

Wade (1971) tested 77 eighth-grade students to compare their reading scores on the *Gates MacGinitie Reading Test, Survey E,* and the *Durrell Listening Series, Advanced Level, Form D-E,* and an IRI. The mean grade scores obtained from the sub-test and from the total test scores of the standardized reading tests tended to overestimate the instructional reading levels for these students by two and a half years.

O'Brien (1973) also contended that standardized tests measured only global reading levels, while IRI's provided the basis for estimating Independent, Instructional, and Frustration Reading Levels. Scores on standardized tests gave the teacher information about a group of students in relation to age-grade norms, but the scores did not delineate the nature of the student's problems in reading. On the other hand, scores on the IRI provided the teacher with specific information on the students' ability to atta ' unknown words, their ability to read with comprehension, and the levels at which the students were capable of performing in these two areas.

From these studies it can be surmised that standardized tests are not the best measures for assessing students' functional reading levels. However, the problem is further compounded if the reading levels of bilingual students are assessed using standardized reading tests. First of all, norms may have been established with native English speakers. Secondly, items

on these tests may be culturally biased in that the tests pre-
suppose certain visual and auditory skills for which the stu-
dents may not have received adequate training. Thirdly, bi-
lingual students are made to feel deficient in tests of un-
familiar lexical items and syntactical structures.

Motta *et al.* (1974) recommended the use of IRI's with ESL
and bilingual students because they claimed that standardized
tests did not take into account such factors as socio-economic
status, motivation, culture, nor the psycholinguistic experience
of these students. In their study, they prepared two sets of
graded passages and corresponding comprehension questions for
these paragraphs. One set of passages were administered indi-
vidually and the other as a group test to non-English-speaking
adults. Both tests successfully indicated that students' func-
tional reading levels. They advised that to further estimate
the student's literacy in his/her own language, an IRI in the
student's native language should also be administered.

## PLAN AND PROCEDURE OF THE STUDY.

### Sample Population

Fifty bilingual students of predominantly English and
Hispanic-language backgrounds (with the exception of two
Italian children and one Lebanese child) were randomly se-
lected for this study. The subjects lived in an area that in-
cluded people of low and middle socio-economic (SES) back-
grounds. They attended a city public school, which provided
them with a bilingual program of Spanish and English and an

ESL program. All students were instructed in the content area
subjects in Spanish until they gained language proficiency in
English. As soon as the students were capable of functioning
at grade level in English, they were removed from the bilingual
and mainstreamed into the English curriculum.

## Instruments

1.  A Group Informal Reading Inventory (GIRI) was con-
    structed as a set of eight passages based on original
    themes. The passages ranged in length from 30-200
    words. The *Fry* and *Dale-Chall Readabilities* were
    used to level the passages from primer to eighth
    grade. Ten multiple-choice comprehension questions
    were constructed for each passage based on the Barrett
    (cited in Lapp and Ramsey, 1976) and Krathwohl (1964)
    Taxonomies.

    The Informal Reading Inventory (IRI) was administered
    as a group test. To score the test, a percentage was
    determined and compared to the following criteria in
    order to determine the comprehension reading levels:
    (a) Independent: 90-100%, (b) Instructional: 75-89%,
    and (c) Frustration: 0-74%.

2.  A *Cloze Test* was constructed by deleting every seventh
    word. The first and last sentence of each passage
    were left intact. The test was administered as a
    group test and students were asked to fill in the
    blanks. In this test an answer was considered correct

as long as it was appropriate contextually. To score the *Cloze Test*, Bormuth's criteria (1967) was used: (a) Independent Level: 50-57%, (b) Instructional Level: 35-46%, and (c) Frustration Level: 19-31%.

3. The *Stanford Diagnostic Test* (1976): Red (grades 1-3), Green (grades 3-5), and Brown (grades 5-8) levels were used to examine literal and inferential reading comprehension.

4. A questionnaire entitled "Teacher Estimate of the Students' Reading Levels" was used. Bilingual students' names were listed and the teacher was asked to estimate the reading level (grade) at which each student was functioning. (This was considered the instructional reading level.)

## Procedure

After the population was selected, arrangements were made with the bilingual coordinator of the school to conduct a teacher-training workshop and to administer the tests. The teacher-training workshop conducted for six bilingual teachers included: (a) a presentation and explanation of the construction and purpose of the tests to be administered; (b) a practice administration, scoring, and evaluation of the tests among the teachers; (c) a discussion and planning of the group testing with bilingual students; and (d) a completion of the "Teacher Estimate of the Students' Reading Levels" questionnaire. The arrangements were that the *Cloze Test* would be administered

initially; the IRI would follow within three days, as exemplified
in the Bormuth study (1967); then, the *Stanford Diagnostic Test*
(1976) would be administered.

## Summary and Analysis of Data

Data concerning the demographics and results from the assess-
ment measures administered to bilingual students are summarized
in Table 1.

The scores from the *Stanford Diagnostic Test* (1976) are
an average of the literal and inferential comprehension results
for the red, green, and brown levels, respectively. For descip-
tive purposes, the students' report card grades on Reading in
the Native Language (N.L.) and English as a Second Language
(ESL) were also included.

Close inspection of Table 1 demonstrates that this random
sample of bilingual students is functioning not only far below
their developmental grade level but also below their assigned
present grade level. Interestingly enough, this fact holds
true even for students who have been exposed to English reading
instruction up to five years. Clearly then, the original argu-
ment that there is a pressing need to assess these students'
functioning reading levels as early as possible and to match
instruction and materials to the students' reading needs is
valid.

In noting the students' reading grades, those in the native
language appear to be much lower than those in English as a
Second Language. A possible reason for this is that students

# TABLE 1

## DEMOGRAPHICS AND RESULTS FROM ASSESSMENT MEASURES ADMINISTERED TO BILINGUAL STUDENTS

Instructional Estimated Grade Level

| Subject | Age | Grade Student Should Be In | Present Grade | Years in U.S. | Teacher Estimate | Cloze | GIRI | Stanford | Level | Previous Grades N.L. | ESL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14 | 9 | 8 | 5 | 8 | 5 | 7,8 | 6.6 | * | B | A |
| 2 | 13 | 8 | 7 | 2.5 | 3-5 | 1 | 5 | 5 | √ | A | A |
| 3 | 14 | 9 | 7 | 3 | 1-2 | P | 4 | 2.7 | X | D | B |
| 4 | 14 | 9 | 8 | 3 | 3-5 | 1 | 4 | 3.6 | √ | - | A |
| 5 | 14 | 9 | 7 | 5 | 3-5 | 5 | 4 | 3.7 | √ | B | A |
| 6 | 13 | 8 | 7 | 3 | 1-2 | 4 | 6 | 4.8 | X | - | B+/A |
| 7 | 15 | 10 | 8 | 5 | 3-5 | 4-5 | 5 | 4.5 | * | C | B+/A- |
| 8 | 14 | 9 | 8 | 3.5 | 3-5 | 3 | 4 | 4 | √ | C | A |
| 9 | 13 | 8 | 7 | 4 | 1-2 | 1 | 4 | 2.9 | √ | - | B |
| 10 | 15 | 10 | 8 | 2 | 1-2 | 2 | 7,8 | 4.5 | * | A | A |

Key:  N.L. = Native Language--Reading
　　　ESL = English as a Second Language
　　　P = Primer Level
　　　* = Stanford--Brown Level
　　　X = Stanford--Green Level
　　　√ = Stanford--Red and Green Level

46

are heterogeneously grouped in the native language, and thus
each student has to compete with students of all ability levels;
whereas, for English as a Second Language, students are homo-
geneously grouped competing only with students who normally
function at their own level.

Contradictory to the above, both native- and second-
language teachers tend to underestimate the students' reading
levels when compared with the results of reading tests. This
factor could be related to the students' poor performance in
reading--the self-fulfilling prophecy--teachers do not feel
the students can do well, and as a result, students do not do
well. Ironically, ESL teachers assign "A's" and "B's" to the
students on the report cards. The question is "why?" If the
rationale is to help the students' self-concept, then this is
acceptable. However, it cannot be overlooked that they may
simply be complying to the educational system's social pro-
motion policy, in spite of the fact that they are aware of the
students' low reading levels. In this case, the students are
deluded in believing that they are achieving and may not be
prepared in terms of reading skills to compete with the world
in and out of school.

## IMPLICATIONS FOR TEACHING

Clearly, it is the case that when junior high to high
school bilingual students are functioning five or more years
below grade level, something has to be done about instruction.
The danger is obvious if instruction in the native language

and English is not presented as a relevant experience; these students become frustrated and eventually drop out of school. Teachers must consciously deal with the students' reading needs and not gloss over these needs by issuing good grades. To deal with these needs, teachers must meet the students' (a) academic needs by providing high interest, low level materials and (b) the students' interests by providing materials and skills that will prepare them for whatever endeavor they seek in the outside world whether it be higher education, academic, or a working vocation.

The possible guidelines for meeting student needs are:

1. Language medium--A decision has to be made whether the student is to be instructed in two languages or whether it may be too late for the student who does not have native language competencies to get the skills in the native language and transfer these. ESL may be the solution in this case because if the student is frustrated, he/she will drop out of school altogether.

2. Assessment--Pretests and post tests (informal and formal measures) must be administered on a continuing basis so that instruction can constantly be adjusted to the students' reading and content area, strengths, and weaknesses.

3. Instruction--(â) *Time* to be allotted in the two languages; (b) *Technique* to be employed--whole group instruction, individualized. (The latter would be the most beneficial in placing part of the responsibility of instruction to the student. With the issuing of performance contracts, the student

49

would then be accountable for his/her success and failure.);
(c) *Content* relevant, functional instruction.  For example,
learning a driver's manual, filling out job applications, or
relevant information that the student needs to deal with in
his/her English environment; (d) *Materials* commerical and
teacher- or student-made, high interest, low reading level;
(e) *Evaluation* of the student, instruction, program, and
changes made accordingly.

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APPENDIX

An Illustrative Story from the Informal Reading Inventory
(In Cloze and Multiple-Choice Versions)

STORY III

"Luciano, wake up!  Have you forgotten what today is?"
whispered mother.  I opened my sleepy eyes.  I _____
that today my uncle and his _____ would be arriving
from Italy.  I _____ as I thought of the food _____
fun I would have.  Then I _____ to my mother.  She
smiled and _____ me.  I then said, "Mother, can _____
take my cousins to the Feast _____ St. Anthony?"  Mother
wrinkled her forehead _____ answered, "You must not go
alone. _____ go together."

I jumped out of _____ and dressed quickly.  I wore
the _____ suit  that mother had bought for _____
special day.  I ran out to _____ kitchen.  Anna was
crying, as she _____ did when Mother combed and braided
_____ hair.  Father and Grardfather sat at _____
table drinking expresso coffee as they _____ of the olden
days in Italy.  _____ liked to listen, because I had
been there.  Grandfather always said, "America _____ a
rich country today, but Americans _____ not have the
respect in families _____ we Italians have."  Grandfather
said, "A _____ is important.  He knows the way _____
should be in the family."  As _____ talked, Grandfather
noticed me and said, "_____, Luciano, show your grandpa
what a _____ grandson he has.  You will be a fine man and
a papa someday too!"

59

## STORY III

"Luciano, wake up! Have you forgotten what today is?" whispered mother. I opened my sleepy eyes. I remembered that today my uncle and his family would be arriving from Italy. I smiled as I thought of the food and fun I would have. Then I turned to my mother. She smiled and kissed me. I then said, "Mother, can I take my cousins to the Feast of St. Anthony?" Mother wrinkled her forehead and answered, "You must not go alone. We'll go together."

I jumped out of bed and dressed quickly. I wore the new suit that mother had bought for this special day. I ran out to the kitchen. Anna was crying, as she always did when Mother combed and braided her hair. Father and Grandfather sat at the table drinking expresso coffee as they talked of the olden days in Italy. I liked to listen, because I had never been there. Grandfather always said, "America is a rich country today, but Americans do not have the respect in families that we Italians have." Grandfather said, "A papa is important. He knows the way things should be in the family." As he talked, Grandfather noticed me and said, "Come, Luciano, show your grandpa what a fine grandson he has. You will be a fine man and a papa some-day too!"

## STORY III--QUESTIONS

1. Who was coming to visit Luciano?
   a. his uncle and his family
   b. his father and grandfather
   c. his sister and mother
   d. his sister and her family

2. Where did Luciano want to take his cousins?
   a. to the block party
   b. to the neighborhood fiesta
   c. to the feast of St. Anthony
   d. to the amusement park

3. What did Luciano's father and grandfather drink?
   a. wine
   b. coca-cola
   c. tomato juice
   d. expresso coffee

4. Why did Luciano like to listen to Grandfather?
   a. He wanted to go to Italy.
   b. He had never been to Italy.
   c. He liked Italy better than America.
   d. He wanted to live in Italy.

5. What did Luciano do after he jumped out of bed?
   a. He went to the kitchen.
   b. He listened to his grandfather.
   c. He dressed.
   d. He talked to his mother.

6. Why do you think Anna was crying?
   a. Her grandfather spilled coffee on her.
   b. She fell off a tree.
   c. She did not want to eat.
   d. She was in pain.

7. How do you know that Grandfather missed Italy?
   a. He wanted to go back to Italy.
   b. He always talked about Italy.
   c. He had relatives in Italy.
   d. He was rich in Italy.

8. How do you know that Mother was concerned about Luciano?
   a. She did not want him to go to the feast by himself.
   b. She always bought him new suits.
   c. She did not want him to have a good time.
   d. She let him do whatever he pleased.

61

9. According to Grandfather, what is the difference between Italians and Americans?
   a.  Americans are poorer than Italians.
   b.  Italians drink more expresso than Americans.
   c.  Italians have better houses than Americans.
   d.  The people of the two countries have different family values.

10. How does Grandfather feel about Luciano?
    a.  He is proud of him.
    b.  He is unhappy with him.
    c.  He dislikes him.
    d.  He feels that Luciano likes to fool around too much.