ABSTRACT

While language has been the chief factor cited as causing Chicano youth to score below the majority population on mental and educational measurement scales, other explanatory factors identified by researchers over the years include socio-economic status, residential area (urban/rural), ethnicity and culture. Citations for 253 studies, books, journal articles, curriculum materials, doctoral dissertations, masters theses and bibliographies, dating from 1923 to 1979, represent an effort to identify available literature pertaining to the achievement and performance of Chicano students. Entries are arranged alphabetically by author, with a separate section for the 32 bibliographies. A brief annotation is included for most entries, along with appropriate bibliographic information, i.e., title, publisher, place and date of publication, volume, number and pagination. (NEC)
A BIBLIOGRAPHY OF MATERIALS, EDUCATIONAL AND TESTING STUDIES RELATED TO CHICANO SCHOLASTICS

Luis Ortiz-Franco

ABSTRACT

This bibliography lists studies, books, curriculum materials, doctoral dissertations, master's theses, and bibliographies on research topics related to educational achievement among Chicano students.

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INTRODUCTION

The educational status of Chicano scholastics has been the focus of journal and magazine articles, master theses, doctoral dissertations, and book length articles throughout the decades in this century. Almost invariably, Chicano youth end up scoring below the majority population on mental measurement scales or show up underachieving in educational measurement scales. The factor mentioned as being the chief determinant in this differential pattern is language. However, the increasing awareness by educational researchers of the multi-faceted character of the educational underachievement phenomenon among Chicano children has added other explanatory factors: socio-economic status (SES), residential area (urban/rural), ethnicity and culture have been added to the list. The relative contribution of each of these variables to educational achievement among Chicano students awaits determination.

The references cited in these pages represent a beginning step of an effort to summarize available data pertaining to the achievement and performance of Chicano students over the years. The entries include journal and magazine articles, master theses, doctoral dissertations, bibliographies, educational materials, and books. There are two sections in the bibliography; each section is alphabetized. This bibliography does not pretend to be exhaustive and the omission of the many other books, articles, essays, and bibliographies is not intentional.
The purpose of the short annotations is to give a general idea of what the materials are about. It is hoped that the references listed will help educators, investigators, and students in researching the many issues involved in the educational achievement of Chicanos.

1. Articles, Books, Doctoral Dissertations, Masters Theses; and Other Materials.


This volume defines force and work by suggesting experiments and posing questions concerning drawings in the book which illustrate scientific principles.


This volume explains principles governing wheels and pulleys by suggesting experiments and posing questions concerning drawings in the book which illustrate the scientific principles. Friction is also explained in this volume.

This volume explains further refinements of the wheel which is introduced in volume three. The fourth volume explains principles behind gears and the relationship between velocity and force. Drawings illustrate the scientific principles.


This book explains the workings of three types of levers and resistance. Drawings illustrate the scientific principles.


This volume explains the principles and some of the uses of inclined planes, as they appear in simple machines, by suggesting experiments and posing questions concerning drawings in the book which illustrate the scientific principles.

Anderson, J. G. Patterns of Achievement Among Mexican-American Students. Interim Report, Mathematics Education Program, Southwest Educational Development Laboratory, Research Center, New Mexico State University, Las Cruces, New Mexico. October 1969 (a).

The California Test of Mental Maturity, California Achievement Test, Contemporary Mathematics Test, and Parental Inventory were administered to Chicano students from grades 1, 3, 6, 7, 9-12 in three distinct ecological areas in South El Paso, Texas. Area differences in favor of increasing acculturation were significant at first grade and remained relatively constant across grades.
Anderson, J. G. Factors Affecting Achievement Among Mexican-Americans in A Metropolitan Context. Final Report, Mathematics Education Program, Southwest Educational Development Laboratory, New Mexico State University, Las Cruces, New Mexico, December 1969 (b).

The effects of social composition of students, teachers' instructional approach, and teacher characteristics on school achievement were investigated for 3,204 predominantly Chicano students from three distinct ecological areas in South El Paso, Texas. Students from higher SES performed better on arithmetic achievement tests. Teachers' background, experience, and educational approach affected student performance.


Investigated the role of ethnicity, Anglo/Chicano, and language, monolingual English/bilingual Spanish-English on English and mathematics grades, language skills and mathematics skills, and non-language intelligence scores on a stratified random sample of 163 families in Las Cruces, New Mexico. One finding was that the socialization and cognitive development of Chicano students may lag behind that of Anglo students.


The relationship of ethnic background, SES, and characteristics of the student and his family on student's grades in mathematics and English the previous semester was investigated. English grades were significantly better for non-Mexican-Americans and for fourth generation Mexican-Americans in comparison with first through third generation Mexican-Americans. No significant differences were found in mathematics grades.


The study investigated the acculturation process as related to "biculturalism" and assessed the self-concept of Mexican-American and Anglo children. Results on self-concept indicated that children with different cultural identification scored differently on the subtests. And results on cultural identification indicated that children of two ethnic groups have varying degrees of cultural identification.


Investigates the historical background of the non-acculturation of the Spanish-speaking people. Discovers the causes of retardation through literature analysis and draws recommendations through a specific study of the children in Williamson County, Texas.


Over 200 films are listed on a wide variety of topics: educational, historical, bilingual education, etc.


This research study was designed to determine the effect of exposure to cultural-social-economic diversity on selected attitudes of elementary school teachers. Results indicated that teachers with more than one year experience with disadvantaged children were more optimistic in their approach and that the training program made participants more liberal in their outlook.

This paper discusses a study with Chicano students comparing content structure and cognitive structure in their learning of probability. It was concluded that further study is needed before conclusive statements can be made concerning the effectiveness of the Word Association technique in identifying the cognitive structure of Chicano students.


The relationship of four pre-tests, Five Dots; Necessary Arithmetic Operations, Division, and Factors and Primes with a Factors and Primes post-test was investigated with two predominantly seventh-grade classes in San Jose, California. The pre-tests did not correlate with the post-test for Chicano students.


This article summarizes the findings of the large scale surveys and investigations undertaken by SMSG. On page 212 mention is made of cultural differences in mathematics education based on findings of a small study involving Chicano and non-Chicano students.


This is a short review of studies discussed by the Stanford Mathematics Education Study Group (SMESG) over a period of about one year. About 40 studies dealing with various aspects of Chicanos' academic achievement are cited.

The title of this article describes the question investigated with Chicanos fifth and sixth grade students in San Jose, California. Results indicated that students learned the prerequisite skills from both versions of the programmed text as measured by the Comprehension Pre-test and Post-test.


The effects of pre-training on parallel test items among Blacks, Anglos, and Chicanos at the eighth grade in San Antonio, Texas were investigated. Chicanos and Blacks benefited significantly from the pre-training.


The role of age, sex, family relations factors, and "mode of response" to test on Wide-Range Achievement Test, Arithmetic and Reading scores among 58 migrant Chico children in Michigan was investigated. Arithmetic scores were higher than reading scores for all ages investigated. Casual family relations resulted in lower reading and arithmetic scores.

A study of teachers' tendencies to grade Spanish-speaking pupils above or below native English speaking children in California.


A careful study on academic achievement conducted in Southwestern New Mexico.

Caldwell, Floyd F., and Mowry, Mary Davis. The Essay Versus the Objective Examination as Measures of Achievement of Bilingual Children. *Journal of Educational Psychology*, December, 1933, 24, 696-702.

A study to determine whether the use of new type tests increases or decreases the language handicaps of Spanish-speaking children.


This report discusses the achievement levels of public school students in California during the 1977-78 school year. All second grade and third grade pupils were tested in reading achievement. All pupils in grade six and twelve were tested in the basic skills of reading, written expression, spelling, and mathematics. Mathematics achievement scores of "fluent English and another language" and "limited English and another language" at grade six are discussed but not at grade twelve.


This study compares the apparent intelligence of Spanish-speaking children with other foreign origin children in Los Angeles. The bibliography at the end of the article provides additional references related to this topic. For a critique of this article see Pasamanick, Benjamin below.


The author discusses the school achievement of Chicanos in the Southwest by the use of data up to 1960. A discussion of the different factors identified is given through the different chapters. Factors such as home environment, culture, language, historico-social, etc. are covered.


An interdisciplinary research study is suggested following a review of the more significant studies that have been attempted to explain the degree of educational retardation of the Mexican-American as related to such factors as life stresses and learning styles.


The effects of a special teacher and a special math program on arithmetic achievement gains among first grade students from Spanish-speaking homes were investigated. The gains of the experimental group were significantly higher than those of the control group.

Results indicate that many Mexican-American pupils may have been placed in classes for the mentally retarded solely on the basis of performance on an I.Q. test which was invalid for Spanish-speakers. A lengthier version of this article can be found under ED050845 bearing the title "Spanish-Speaking Pupils Classified as Educable Mentally Retarded."


The performance of Anglo and Spanish-American children on the WISC, stratified by ethnicity and social class, was investigated. One of the findings was that ethnic origin and social class affect the performance on general intelligence and verbal abilities scores.


Questionnaires, surveys, and tests were administered to students, teachers, principals, and district superintendents in public educational institutions at all levels in the U.S. during September and October, 1965. A total of 4,000 public schools and 645,000 pupils participated. Tables concerning school achievement, teachers characteristics, school personnel, students' attitudes, aspirations, habits, and home language of Mexican-American, Puerto Rican, Indian American, Oriental-American, Negro, and White are shown.


The differences on mathematics, English, reading, and attitudes of a bilingual program and a regular school program for ninth grade Chicano students in Phoenix, Arizona were investigated. Significant differences were found in reading, English, and attitudes but not in mathematics. Results favored students in the bilingual program.


The author concluded that bilingualism is not uniform as to kind and that its influence on individuals of different races and in different environments cannot be predicted without a great deal of additional research.


Prognosis based upon the Goodenough I.Q. at school entrance is likely to underestimate the future abilities of Spanish-speaking children.

Spanish-speaking children in their first school year from two elementary schools in South Texas were administered the Metropolitan Readiness Test, Form A in English and Spanish. Children performed better on Word Meaning when the test was administered in Spanish but performed better on the alphabet and number subtests when the test was administered in English.


The predictive validity of the Metropolitan Readiness Tests when administered in English and Spanish to Spanish-speaking first grade children was investigated. The subtests of Word Meaning and Listening were not highly related to reading success. Three differences favoring the English administration and three differences favoring the Spanish administration were found.


An article by the same author and based on this thesis can be found in Journal of Juvenile Research, October, 1930, 14, 267-269.


The Test of Basic Experience was administered in English and Spanish to first grade students of Spanish-speaking background in eleven Illinois city school districts which had bilingual programs. Also, an empathy scale and classroom behavior of teachers and aides in bilingual programs were recorded. Mathematics and language achievement showed significant gains when measured in Spanish for students in the bilingual programs. Teachers had greater empathy than aides and Anglo teachers showed greater empathy than Latin teachers.

The mathematics achievement of Fourth grade Chicano, Black, and Angló pupils was investigated. The data analysis was erroneous, and the result was not conclusive.


East, Mary Elizabeth. A Comparison of the Reading Achievement of Mexican and American Children on the Gates Silent Reading Test. University of Southern California, 1942.

Ellis, Christine E. The Relation of Socio-Economic Status to the Intelligence and School Success of Mexican Children. Master's Thesis, University of Texas, Austin, 1932.

The thesis discusses the cause-effect relationship between heredity and environment as reflected in scholastic achievement of the Latin-American student.


In March, 1965, 777 Minneapolis elementary school teachers completed a questionnaire expressing agreement or disagreement with statements about disadvantaged students. Some family and professional background did not show to be related to attitudes toward the disadvantaged. However, ethnicity and SES level did show to be related to attitudes.

Student Control and Choice: Their Effects on Student Engagement  
in a CAI Arithmetic Task in a Low-Income School. Stanford Center  
for Research and Development in Teaching, Technical Report No. 41,  
August, 1974.

The effect of two treatment groups, choice and control, were  
compared on the bases of daily scores on the CAI Drill and Practice  
program and engagement levels recorded every 10 seconds. Two groups  
of 19 subjects selected from fourth and fifth grades and divided by  
ethnicity, age, sex, and initial math achievement participated in the  
study. One finding was a significant difference for percent of  
correct responses and the number of problems worked.

Flaugher, Ronald R. and Rock, Donald A. Patterns of Ability Factors  
Among Four Ethnic Groups. Project Access Research Report No. 5,  

The differing patterns of abilities among high school males of  
four ethnic groups, Blacks, Chicanos, Whites, and Oriental, were  
investigated during the 1969-70 school year in Los Angeles, Memphis,  
and Washington, DC. Similarity of factor loading patterns indicated  
that essentially the same patterns of abilities are demonstrated  
regardless of the ethnic identity of the examinee.

Berkeley, California: Far West Laboratory for Educational  
Research and Development, 1967. 41 pages. ED013164.

Sixteen suggestions are presented to teachers and administrators  
that would help provide transfer of training for all students into a  
mixed Anglo-Mexican culture. The publication concludes with a  
listing of supplementary audiovisual aids and instructional materials  
which are available for classroom use at both the elementary and  
secondary school level.

Garcia, Angela R., and Zimmerman, Barry J. The Effects of the  
Examiner Ethnicity and Language on the Performance of Bilingual  
Mexican-American First Graders. Journal of Social Psychology,  

The effects of the ethnicity of the praiser and the language,  
Spanish-English, were investigated among first grade bilingual  
Mexican-American students in Tucson, Arizona on a bar pressing task.  
A significant main effect for ethnicity of praiser and interaction of  
language order and praise language were found at the .01 level. No  
other interactions attained significance.

The effects of normal classroom procedure and open classroom procedure in language arts classes upon the scores on achievement tests in reading, social studies, arithmetic reasoning, and arithmetic concepts were investigated among 235 seventh grade students in Albuquerque, New Mexico. 54% were Mexican-American. No significant differences in arithmetic were found but the open classroom set-up resulted in higher reading achievement scores.


The relationships of teachers' professional background, mathematical background, attitude toward algebra, feelings about algebra's practical value and pupils' ethnic background to pupils' attitude toward algebra, feelings about algebra's practical value and achievement was investigated. Anglo-American and Latin-American ninth grade students and teachers participated in the study in a West Texas school district.


A comparison of the apparent intelligence differences among Spanish-speaking persons and several Indian tribal groups of the Southwest.


Study based on number addition performed by Spanish-speaking children in San Antonio, Texas. Bibliography provides comparison with other culture groups.


The purpose of the study was to describe conditions, rather than recommend solutions, prevalent in the Texas schools attended by Chicanos. School facilities such as teachers, buildings, and equipment are discussed as well as school enrollment, attendance, socio-economic status of Chicanos, language factors, and the unsuitability of intelligence tests as applied to Chicanos are also discussed.


The pre-training on parallel items before administration of a mathematics predictor test to Chicano students was investigated. A lengthier discussion of this study can be found in the Ph.D. Dissertation by the leading author of this working paper. DAI: Vol. 37, No. 2, page 851-A. A briefer version of the Ph.D. Dissertation can be found in Journal for Research in Mathematics Education, Vol. 9, No. 2, March, 1978, pages 118-125, authored by Ginther, Joan R.
ED068470.

The influence of race, sex, and city on inductive reasoning among Black, Chicano, and White high school juniors from Los Angeles, Memphis, and Washington, DC was studied. A general finding was that Whites fared better than Blacks or Chicanos. Other specific findings are discussed.


The verbal and math SAT scores of Chicano and Anglo freshmen were used as predictors of grade point average for the second quarter freshman year. The hypothesis that the two groups had the same regression plane was rejected. Math scores on the SAT had no correlation with GPA.


Guynn, K. P. Effects of Ethnicity and Socio-Economic Status on Learning Achievement of Ninth and Eleventh Grade Students. April, 1974, ERIC. ED088655.

The performance of Mexican-Americans and Anglo ninth and eleventh grade students on the Iowa Test of Educational Development was studied. Subjects were divided into high and low SES. The only significant factor was ethnicity of the eleventh graders.

Hanson, Edith Josephine. A Study of Intelligence Test Results for Mexican Children Based on English and Test Forms. Master's Thesis, University of Southern California, 1931.


Methods and techniques in interaction analysis were extrapolated and modified to develop a new theoretical basis for an observation system to analyze the cognitive aspects of teacher discourse. The predominant cognitive process inferred from the discourse was memory. Each of the four teachers who participated had very little discourse judged as convergent and almost none as divergent production.


General reference to field-independence-dependence in relation to Chicanos is made but no specific recommendations for improving instruction of mathematics for Chicano children are made.


The essays in this volume survey the characteristics of the language used by Chicanos in the Southwest. Local and regional variations are discussed as well as code switching and cognitive aspects of bilingual communication.


The Peabody Picture Vocabulary Test (PPVT) was administered to 320 headstart Chicano students in Los Angeles along with the Goodenough-Draw-A-Man-Test. The major result of this study demonstrated that perhaps...
in the case of the Mexican-American child one of the specific ways in which the two languages interfere with each other has its base in certain structural differences between the two languages.


The effects of ten programmed units taught first in Spanish and then in English, or taught both times in English to first grade Chicano students in Los Angeles on a diagnostic test were studied. The group with instruction in both Spanish and English scored better on the aural portion of the post-test.


This study investigated the question of test bias to develop an index of the appropriateness of a test to a particular socio-economic or racial-ethnic group. Whites, Chicanos, Blacks, and Orientals participated. A conclusion was that test bias cannot be conclusively demonstrated in a wholly satisfactory manner.


The relative position of adjunct questions on a passage and the effects on the performance of monolingual and bilingual college students on two types of questions: relevant or incidental was investigated. The treatments produced differences in the incidental scores for the monolinguals. The treatments produced differences for the bilinguals in the relevant question scores.


This book is organized in four parts. Cognitive and affective studies in bilingual-bicultural education; programs in bilingual and bicultural education: An analysis of total and partial immersion programs; teacher directed issues: some practical suggestions from theoretical domains; and general topics and review of the literature.
A compilation of essays on the different issues involved in I.Q. tests. One article addresses culture, cognition, and I.Q. testing; another writes about the social implications of I.Q. And another discusses the politics of I.Q. The diversity of topics make this book interesting reading.


Jarvis, Gertrude O. A Study of the Relation of Achievement in Spanish to Achievement in English. Master's Thesis, University of Texas, Austin, 1953.


The learning scores of fourth graders on the Familiar and Abstract tasks for Recall and Serial Learning, and the learning scores of sixth graders on the Familiar Tasks for Recall, Serial Learning, and Paired Associates tests were investigated among low SES Anglo monolinguals and Chicano bilinguals. The I.Q. range was from 60 to above 120. A significant nationality by I.Q. interaction was found at both grade levels. Low I.Q. Chicanos performed a lot better than low I.Q. Anglos. One conclusion was that I.Q. is a valid index of the learning ability of Anglo children but not for Chicanos.


The purpose of the study was to examine the psychological impact of stories and story books on preschool children: Blacks, Puerto Ricans, Chicanos, Sioux, and Navajo. Results indicated that the inclusion of ethnic books is useful in a program aimed at non-white children.


This is a study, based on census figures, of educational attainment of adults in the United States and shows a wide range among the ethnic groups. The main national lineages included are: German, English, Irish, Italian, Polish, Mexican, and Russian.


This collection of readings includes essays on historical and cultural perspectives of the Chicano. Educational issues such as testing, teacher training, achievement, guidance and curriculum, bilingual education, and role of educational institutions with respect to Chicanos are also discussed.


This book discusses some of the difficulties faced by "culturally disadvantaged" children when they enter school and confront a middle class environment which is totally different from their previous experience. The author also makes the observation of the relativity of the term "culturally disadvantaged."


Spanish and non-Spanish surnamed second grade students were administered the MAT reading and math as pre-tests and a post-test written by the author covering the material taught. The MAT arithmetic score was an effective predictor of the post-test score for both populations.

The purpose of this study was to determine if children who attended a bilingual math-science center would increase their level of performance to a greater degree than their counterparts on a test of problem solving and scientific thinking. The author concludes that a math-science center should be a basic part of every bilingual school program.


The purpose of this study was to investigate the learning efficiency in children from four different ethnic groups: Black, White, Chinese-American, and Spanish-American. The author concludes that when children from different ethnic backgrounds are required to demonstrate ability for new learning, average performance between groups is indistinguishable.


The performance of 50 fourth grade Chicano children in Albuquerque, New Mexico on the Stanford-Binet, Form M administered in English, and Form L administered in Spanish was investigated. A t-test showed significantly better performance on the English version.


The tests mentioned on the title were administered to 84 subjects selected on the basis of language ability and ethnicity, (Anglo monolinguals, Chicano bilinguals, Chicano monolinguals in English), sex, and grade level. One finding revealed no differences on arithmetic which required a non-language symbolic system.
This article summarizes the literature of several research studies on the psycholinguistic abilities as measured by the Illinois Test of Psycholinguistic Abilities (ITPA) of three ethnic groups: Blacks, Indians, and Mexican-Americans. The author hypothesizes that ethnic group differences may be accounted for by different child rearing practices among the ethnic groups.

Klingstedt, Jo. Teachers of Middle School Mexican-American Children: Indicators of Effectiveness and Implication for Teacher Education, 47 pages. ED059828.

This essay is a summary of research and related literature on the problem of identifying indicators of teacher effectiveness. Many suggestions for preparing teachers to deal with Mexican-American students are aimed specifically for teachers at the sixth, seventh, and eighth grade levels.


Reports on a research project carried out among three generations of Mexican-Americans in an East Texas community in order to determine their relative competence in English and Spanish. Educational implications of the findings are also discussed.


The relationship of parent's occupation, family size and organization, child's school attendance, preschool experience and I.Q. to school achievement was studied on 305 Mexican-American students. The combination of parent's occupation, family size and organization, preschool experience, sex, and school attendance was more significant than I.Q. as a predictor of school achievement.


The purpose of the simulation technique described in this report is to develop teacher and counselor empathy with the Spanish-speaking student. Findings include the fact that many students are not aware of the problems faced by Spanish-speaking children, and that few students realize the number of Chicano students in Michigan.


As means of solving some of the problems faced by the administrator and faculty of the Tompkins Schools a special testing program was developed, the purposes of which were: to determine the validity of intelligence tests administered in English to Spanish-speaking children and to find the grade in which English becomes the dominant language.


The new Stanford Reading and Arithmetic Tests were given to Spanish-speaking children and English-speaking children in a number of schools in the Lower Rio Grande Valley.


Narrative and analysis of the development and meaning of the cooperative Inter-American tests, as parallel tests of achievement, in English and Spanish, in Puerto Rico.

The belief among many observers that Spanish-speaking children are gifted in drawing and handwork is not supported by a comparison of the scores at any age level.


The Word Meaning and Arithmetic Reasoning subtests of the Short Test of Educational Ability, Level Three were administered in English, Spanish, and bilingually to 142 Fifth grade Spanish-surnamed students. No statistically significant differences on achievement were registered among treatment groups.


The purpose of the study was to investigate what factors are associated with college GPA among Chicano and non-Chicano college students. Students taking Introductory Sociology in the spring of 1969 at UTEP were surveyed, 252 Chicanos and 452 Anglos, and were stratified by sex and GPA: below 2.0; between 2.0 and 2.9; and 3.0 and above. Family background factors affecting Chicano elementary and high school students seem to have little value in predicting success in college as measured by GPA.


This position paper presents past and current research findings pertinent to the disproportionately large numbers of Mexican-American children in special education classes. It was determined that the pupil-personnel department's clinical testing procedures rather than referral processes produced the ethnic misrepresentation in special classes.


The paper reports the responses of mothers of children who were in classes for educable mentally retarded in two public school districts in Southern California. Stigmatization was a major concern of parents interviewed, and many parents were justified in seeing the program as a "sentence of death."


An intensive analysis of the relative value of using the Vocabulary and Block Design subtests of the WISC to predict Full Scale I.Q. based on six verbal and five performance WISC subtests was performed. Black, Chicano, and White children participated in the study. The sum of the scaled scores on the Vocabulary and Block Design subtests correlated .88 with Full Scale I.Q.


Micha, Claude Angus. The Intelligence of Nine and Ten Year Old Mexican Children as Measured by the Leiter Intelligence Performance Scale. Master's Thesis, University of Southern California, 1941.

This document contains a proposed curriculum for a Bachelor of Science program in elementary education with an academic concentration in bilingual education for Spanish-English bilinguals. Suggestions for the teacher education curriculum are presented along with explanation.


Creativity measured by GTOC, I.Q. measured by Lorge-Thorndike Intelligence Test, and achievement measured by Comprehensive Test of Basic Skills was examined among sixth grade students in El Monte, California. Sex, surname, place of birth, and SES were the independent variables.


The author discusses the different issues involved in the testing of Mexican-American children in the schools. The predictive validity of I.Q. and aptitude tests, as well as achievement tests is questioned. The author outlines seven areas of research on testing and Chicanos that ought to be further investigated.


The performance of elementary and junior high school students from three ethnic groups attending segregated, segregated/desegregated, and desegregated schools was analyzed. The Iowa Test of Basic Skills was administered, and none of the results for Mexican-American students were statistically significant.


This newsletter reports findings of NAEP's third science survey. It reports that students least likely to be part of the 21st century's scientific community are Blacks, Hispanics, females, and residents of disadvantaged-urban areas. Youth in these groups perform below national levels in science at all three age levels surveyed.


The Otis Quick Scoring Mental Ability Test; Metropolitan Achievement Test, Battery A and its alternate form were administered to third grade Chicano pupils in San Antonio, Texas. No significant differences were observed in spelling and arithmetic computation. However, significant differences were found in vocabulary, reading, language, and arithmetic concepts.

The Observation Schedule and Record SV was used to score classroom observations for 40 eighth grade Anglo-American and Mexican-American teachers of low SES Chicano students. Math and social studies classes participated in the study.


The author examines statewide data in California regarding student placement in EMR classes. The study found a clear lack of relationship between the Mexican-American composition of classes for the educable mentally retarded and regular education classes.


This study investigated the trial-and-error process and cognitive factors of Chicano students in mathematical word problems. Tables of intercorrelations among math achievement, reading achievement, general reasoning, syllogistic reasoning, divergent thinking, and field dependence are featured.


A bilingual education program is described in which the subject materials are taught in both Spanish and English at separate periods during the day. A description of Horn's Language Research Project and the Ott Study followed by test data is also included.


The authors argue in this essay that one should seriously question the cultural bag of assumptions and attitudes that underlie intelligence tests. They restrict themselves to the case of Chicano children. Many of their comments apply to other non-middle class children as well.


Palmer, M., and Gaffney, P. *Effects of Administration of the WISC in Spanish and English and Relationship of Social Class to Performance.* Psychology in the Schools; 1972, 9, 61-64.

The WISC was administered in Spanish and English to fifth grade children in the Nogales Elementary School District. ANOVA revealed no significant differences between the English and Spanish testing procedures on any of the subtest scaled scores.

Parrot, Jean Jacques. *Actualización Matemática, AM-1*. 1971, 40 pages. ED0649871

This document suggests elementary-level learning activities for helping the students develop thinking processes and power of generalization and abstraction through the observation of concrete objects. The document is not intended as a textbook but rather as a report to bring elementary school mathematics teachers up to date on current ideas.


This document presents a series of exercises designed to help elementary school children develop skills in mathematics and logic. By means of stories, games, questions, and illustrations, the first set of exercises presents the idea of number systems with bases other than 10. The concept of exponents is also explained.


This document is a teacher's guide and suggests learning activities for kindergarten children to develop skills of basic reasoning and numerical calculations that the children will be using throughout life.

Five tests were administered to 36 Spanish-speaking and 41 English-speaking students of the ninth-grade in Brownsville High School during the 1929-30 season. The data were used to analyze and compare the abilities of Spanish- and English-speaking students and to draw conclusions and to make recommendations.


The author discusses the uncontrolled variables in the Carlson, et al. study above. The uncontrolled variables mentioned are: inadequate diet, education, and work status of parents, pre- and paranatal factors, difficulty in rapport, cultural set, motivation of children, and educational level of children.


A study of children, age 9-12, in Tucson, Arizona. Shows correlation of economic status with physical and mental test scores.


Three low SES and three middle class SES kindergarten classes in San Bernardino County, California participated in this study addressing the question: What are the differences, if any, in the development and acquisition of number concepts between children of middle SES and low SES levels? One finding was that SES appears to have significance in the acquisition of number concepts favoring middle SES. Another finding was that bilingual children require activities to enable them to understand the concepts without dependence on a demonstration by verbalization.

Peterson, Margaret W. Curricular Preferences of Elementary School Children. Master's Thesis, University of Texas, Austin, 1942.

This thesis discovers the curricular preferences of elementary school children of the Laredo Public Schools, and determines the reasons for their liking and disliking certain subjects.

Article dealing with the influence of language background on intelligence tests by a comparison of the scores on two tests made by children from English-speaking homes and from non-English-speaking homes.


This study investigated the reliability of the Wechsler Preschool and Primary Scale of Intelligence among low SES Chicano children in Tucson, Arizona. Among other findings, the similarities and math subtests showed lower reliability for Chicano females.


This review discusses studies involving Chicanos in the areas of acculturation and education, and acculturation and personality. The author identifies the need for more enlightened research relevant to acculturation of Chicanos.


This paper reports the findings of two experiments investigating the role of verbal mediation in the learning of Mexican-American children in the third grade. One conclusion was that Mexican-Americans can profit from the opportunity to use verbal mediators to facilitate further learning.

This study sought to ascertain and compare the academic achievement, the bicultural attitudes and self-concepts of third and fifth grade elementary Hispanic and non-Hispanic pupils in a bilingual school and two non-bilingual schools in New York City. One finding was that the time devoted to the study of a second language was not affecting the growth in mathematics skills and understanding of concepts of the non-Hispanic pupils in the experimental group.


The primary and intermediate batteries of the Stanford Achievement Test were administered to second and fifth graders classified as "disadvantaged." The students were Mexican-American and other (Anglo, Indian, and Black). One finding was that the disadvantaged Mexican-American fifth graders were .68 academic years below the grade norm in total achievement.


The author notes in this article that Mexican-American children have been neglected both educationally and legally. Cases of educational discrimination are discussed and included are references to 152 legal citations.


This article discusses the influence of heredity, environment, and language on test scores of Spanish-Speaking children.


The article describes a math curriculum project in the Los Angeles Unified School District during 1968-1969 school year for Spanish-speaking pupils at the junior high school level. The program was dependent on a teacher-pupil interaction with the text being a catalyst. Forms Y and W of the California Arithmetic Test were used as pre- and post-test, respectively, to evaluate the effectiveness of the program. A statistically significant difference at the .05 level was found favoring the experimental group.

Sheldon, W. H. The Intelligence of Mexican School Children. *School and Society*, February 2, 1924, 19, 139-142.

This study deals with the comparison of differences in "racial" intelligence.


This volume consists of the proceedings of a Canadian-American conference devoted to the topic of bilingualism held at the Plattsburgh campus of State University of New York. The focus of the essays is on the question of what effects bilingualism may have on the individual language user and on society.


The Stanford Reading Test, SCAT, STEP, and district achievement tests in reading and math were administered to elementary school children during the three years when three de-facto segregated schools were being combined into one integrated school. No significant differences were found across time within any ethnic group. Between groups it was found that while Anglos maintained their achievement average, Chicanos' averages decreased.


The authors discuss dropout and trancency rates among Chicanos and Blacks during the 1959-60 and 1960-61 school years in Los Angeles. They also point out to the need for solutions rather than just stating the problems on the part of school officials in improving the educational experience for minorities.


A psychological study of the disadvantages of bilingualism.


The authors discuss the experiences of two projects in Arizona intended to improve the mathematics skills of Chicanos and Navajos. The Somerton Program, Somerton, Arizona, worked mainly with migrant Chicano children, and the Navajo Project worked mainly with Navajo children. No hard data is provided to evaluate the effectiveness of these two programs. However, the authors state that the efficient use of trained teacher aides appears to be an available and desirable avenue for the immediate improvement of programs for ethnic minorities similar to the ones discussed in the article.


The author includes material that is aimed at developing listening-speaking, and reading-writing skills in the teaching of English to Spanish-Speaking pupils. The author includes poems, games, songs, and structured oral drills. Grades 1-8 are covered.


Student's potential for future scholastic achievement measured by Metropolitan Readiness Test, and general ability in dealing with English language concepts and verbal ability was investigated among students whose home language was Spanish only or Spanish and English. The Spanish and English group scored better on the vocabulary tests.

A collection of essays on bilingual education issues covering a broad range of topics dealing with language education policy, linguistics, psychology, sociology, philosophy, evaluation of bilingual education, and bilingual education and language planning.


Stewart, Omer C. *Problems in Education and Acculturation in Multicultural Communities*. Non-dated. ED011786.

The author discusses the assimilation and education of ethnic minority groups into the dominant societal organization and patterns. The author states that all ethnic groups have the same potential for academic achievement.


"EL MATH," a computer-assisted instruction (CAI) course intended for in-service training of teachers of elementary school mathematics is translated into Spanish, together with accompanying handbook, achievement tests, and attitude scale. The course was at one point recommended for use in Chile. An evaluation of the course by Chilean educators is included in the appendices.


First grade rural Mexican-American children were tested to determine whether the use of a bilingual interpreter would significantly influence their verbal performance, and total I.Q. scores. Results indicated no significant differences.

The performance of Anglo and Chicano second graders in Greeley, Colorado on six Piagetian conservation tasks was investigated. Chicanos and Anglos showed different patterns of conservation abilities.


A study of the correlation between SAT scores and college graduating seniors' GPA for science and engineering and non-science majors at Rice University, data was analyzed for 482 students including Chicanos and non-Chicanos, males and females. The conclusion reached was that except for Chicano females SAT scores should not be used to predict success in college.


Multietnic low achieving students in the seventh grade from San Francisco, Oakland, and San Jose, California were administered achievement and attitude scales, and a newly developed curriculum material. The pretest scales were unreliable but the post-test scales were reliable. One of the results revealed an improvement in attitude among the non-Chicano students but not for Chicano students.


First grade Anglo middle class and bilingual Chicano lower class students were administered the Goodenough-Harris Draw-A-Man Test and its relationship to levels and patterns of attainment of selected non-metric concepts of geometry was researched. No significant differences were found.


Report of a study made of children in the San José Schools on Gates Silent Reading, Stanford Achievement, and Pintner-Cunningham Primary Mental Tests. Results were generally low.


The achievement levels of first and third grade students in a monolingual and in a bilingual program in Laredo, Texas were investigated. The California Arithmetic Test was administered and significant differences favoring the bilingual program were found.


This study investigated the effects of the language factor and cultural content factor of mathematical testing on Chinese and Chicano students. Four forms of a test were developed by modifying the word-problems scale only. Chinese low achievers did better on the modified form than on the original, and Chicano students scored higher on the English forms than on the bilingual forms. Other findings are reported.


This volume is divided into three parts: Mexican-Americans, American Indians; and suggestions for further research. The section on Mexican-Americans is subdivided into assumptions and methods, language resources and development, and cultural and linguistic interactions. The same subdivisions apply to the section on American Indians.

This study looked at the developmental trends in the acquisition of specific syntactic rules in the spoken English of Spanish-speaking Chicano children and assessed the comparative development of the same syntactic constructions in the oral speech of monolingual English speakers. The Chicano children were from kindergarten to 6th grade and the English-speaking children were from grades 1, 3, and 5. Findings indicated there was improvement in second language performance as a function of time of exposure to English. However, the increase was not uniform across levels nor was there uniformity of improvement between each syntactic construction studied.


Lesson plans developed for the 1964-65 school year in Imperial County, California are detailed in this document. The special project classes met at least one-half hour daily and class enrollment was limited to fifteen pupils. The audio-lingual approach to learning was to be used with emphasis on increasing facility in the use of oral English.


This monograph explores problems connected with the evaluation of the influence of educational programs on Mexican-Americans, by considering the objectives of the formal school program and the influence of informal education.


The study describes the relative difficulty of certain semantic constructions in comprehension tests for two groups of young bilingual children: Spanish-English and Navajo-English. Findings indicate that bilingual children do not parallel monolingual children in patterns of difficulty of semantic categories. Other detailed findings are provided.


The purpose of this investigation was to study the attainment and generalization of a new concept. Chicano and Anglo fifth graders of similar SES from Tucson, Arizona participated in the study. One conclusion was that ethnic background did not interact with any treatment variation and Chicano children significantly exceeded their own baseline score by transferring the concept to the new generalization items.

The author reviews studies and issues pertaining to intelligence testing of Chicano children. He concludes that factors such as the language of the administration of the test, the extent of the verbal factor in it, and the ethnic background of its administrator are important intervening variables that militate against the optimal performance of the Spanish-Speaking children.

11. Bibliographies


