An effective educational development curriculum for Mexican-American high school students

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AN EFFECTIVE EDUCATIONAL DEVELOPMENT CURRICULUM
FOR MEXICAN-AMERICAN HIGH SCHOOL STUDENTS

A Project
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts
in
Education:
Vocational Education

by
Adam Castro
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June 2001

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ABSTRACT

According to the National Center for Educational Statistics (1999), Hispanic students were more likely than White and Black students to leave school before completing a high school program. In 1998, 9.4 percent (9.4%) of Hispanic students dropouts, compared with 3.9 percent (3.9%) of White and 5.2 percent (5.2%) of African-American students.

Solutions that aim to fix this problem which are already in place, select Mexican-American students according to their potential for academic success. Tracking students primarily on the basis of standardized tests invariably exclude many Mexican-American students.

The purpose of this project was to design a year long course curriculum in educational development. Specifically, the curriculum will serve the educational needs of many Mexican-American high school students who academically need it. The objective of the curriculum will be to expose students to educational opportunities. The study investigated the predictors of educational aspirations among Mexican-American high school students. In particular, the impact of acculturation, academic achievement, socioeconomic status, perceived parental
educational expectations, and future significance of job success were examined.
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CHAPTER ONE

BACKGROUND

Introduction

The contents of Chapter One present an overview of the project. The context of the problem is discussed followed by the purpose, significance of the project, and assumptions. Next, the limitations and delimitations that apply to this project are reviewed. A definition of terms is presented, and finally organization of the project is discussed.

Context of the Problem

Mexican-Americans are among the poorest of all minority groups in the United States. Some estimates report over 25% of all Americans with Hispanic backgrounds survive below the poverty line (Fields, 1988). Others say that the statistics do not take into account the difficulty in keeping track of Hispanics (due to internal migration and illegal immigration) and, consequently, the percentage of Mexican-Americans living below the poverty line may be much greater than the official census numbers indicate. Some researchers hypothesize that it is not an exaggeration to suggest 10% to 15% of all Hispanic students come to school suffering from some degree of
malnutrition. How can students concentrate on their studies and think about preparing for an education when a significant number are worried about getting enough to eat? Because the parents of Mexican-American students have educational levels that are very low and have had little school success themselves, it is difficult for them to advocate for their children's educational needs.

Life circumstances force many Mexican-American students to start school at one whole grade level behind their Anglo-American peers. After that, they simply fall further behind because the support structure intended to help them catch up academically is either not there or is weak and inconsistent.

Mexican-American students are not part of an educational structure for which the goal is to deposit them at the door of some institution of higher education. Of those Mexican-American students who graduated from high school in 1985, only 27% enrolled in college. So for every 100 Hispanic students, 63 graduate from high school and 17 decide to pursue education beyond high school (Fields, 1988).
Purpose of the Project

The purpose of the project was to design a year long course curriculum in educational development. Specifically, the curriculum serves the educational needs of Mexican-American high school students in the Rialto Unified School District. The curriculum, adapted, would assist students as a supplement and/or primary course curriculum to help identify factors that contribute to the academic resilience and achievement among Mexican-American high school students.

Significance of the Project

Mexican-American adolescents may be at academic risk due to the stresses of minority status, discrimination, alienating schools, economic hardship, difficulty understanding the English language, or having parents who are unfamiliar with the education system in the United States (Suarez-Orozco & Suarez-Orozco, 1995).

The fact that a high percentage of Mexican-Americans drop out of school shows the existence of factors, like poverty, and acculturation, that increase the risk of academic failure. Mexican-Americans have been noted to have the highest dropout rates in the United States (National Center for Educational Statistics, 1999).
Historically, the Mexican-American population has had long-standing records of poor academic achievement, which partially explains the under representation of Mexican-Americans in higher education (De La Rosa, 1990). This project was developed as a response to this ailing problem.

Limitations and Delimitations

During the development of this project, a number of limitations and delimitations are noted. These limitations and delimitations are presented in the next section.

Limitations

1. The course was designed specifically for Mexican-American high school students within the Rialto Unified School District;
2. The project was limited to students who may be at risk for academic failure.

Delimitations

1. The scope of this project was delimited to Rialto Unified School District;
2. The entire number of high school students within the Rialto Unified School District further delimited the project.

Definition of Terms

The following terms are defined as they apply to this project.

- **Acculturation** - Modification of one culture as a result of contact with a different, especially more advanced culture (Verdugo, 1986).

- **At-Risk** - A population of students who experience barriers to successfully complete high school including individuals with exceptional needs (National Research Council, 1993).

- **Discrimination** - To distinguish between things (De la Rosa, 1990).

- **Hispanic** - General term that refers to Spanish-speaking people from all countries (Fields, 1998).

- **Immigrant** - One who leaves one country to settle in another (Manuel, 1995).

Resilience - Ability to recover rapidly, as from misfortune (Valverde, 1998).

Organization of the Project

This project is divided into four chapters. Chapter One provides an introduction to the context of the problem, purpose of the project, significance of the project, limitations and delimitations and definition of terms. Chapter Two consists of a review of relevant literature. Chapter Three outlines the population to be served, and the project design, and budget. Chapter Four presents conclusions and recommendations generated from the project. The project references will follow the Curriculum Guidelines.
CHAPTER TWO
REVIEW OF THE LITERATURE

Introduction

Chapter Two consists of a discussion of the relevant literature. A brief history of educational opportunities for underrepresented students, the role of the parent, broadening the concept of education, a brief Mexican-American history of high school achievement, and an introduction to establishing basic skills.

A Brief History of Educational Opportunities for Underrepresented Students

In 1954, Brown vs. Board of Education of Topeka, the courts ruled that a "separate but equal" education is, in fact, not just and not equal. The fact that class sizes are larger and the student-teacher ratio is higher in such barrio schools demonstrates why laws were made to promote integration (So, 1986, 1987).

Our nation has asserted a commitment of providing an educational opportunity since the mid 1960's to motivate and support students from disadvantaged backgrounds. Congress established a series of programs to help low income Americans enter college and graduate. These
programs are funded under Title IV of the Higher Education Act of 1965 and are referred to as the TRIO programs.

The history of TRIO is expanding. It began with Upward Bound which emerged out of the Economic Opportunity Act of 1964 in response to the War on Poverty. In 1965, Talent Search, the second outreach program, was created as part of the Higher Education Act. In 1968, Student Support Services, which was originally known as Special Services for Disadvantaged Students, was authorized by the Higher Education Amendments and became the third in a series of educational opportunity programs (Calvin, 1990).

Over the years TRIO Programs have been expanded and improved to provide a wider range of services and to reach more students who need assistance. The Higher Education Amendments of 1972 added to the TRIO group by authorizing the Educational Opportunity Centers. Amendments in 1986 added the Ronald E. McNair Postbaccalaureate Achievements Program (Calvin, 1990). And in 1990, the Upward Bound Math/Science Program was created to address the need for specific instruction in the fields of Math and Science (Valverde, 1998).

In 1976, The University of California established the Early Academic Outreach Program (EAOP). This came in response to a study that identified barriers and
recommended solutions to the problems educationally disadvantaged students face in admission to UC. Conducted in 1975, the UC study evaluated educational opportunities for underrepresented students: Native-American, African-American, Chicanos, Latinos, and low-income students. The study identified barriers to postsecondary education, suggested methods of increasing access, and recommended steps to support academic success among these groups of students.

The study showed that the primary barrier to access and retention was a low level of academic preparation, which resulted in low rates of eligibility for University of California admission (Calvin, 1990). With these findings, the UC system requested and received state funds to initiate a series of outreach programs to serve students from underrepresented groups. The result was EAOP, which has grown into a system wide effort that continues to serve many students annually.

In order to take advantage of these programs, a student must have the potential for college. Disadvantaged students with a family history of low income and who need admissions assistance and support services to succeed in college are admitted. High school students from families
in which neither parent holds a bachelors degree is also a major factor for admission.

The goal of these programs is to increase the rates at which participants enroll in and graduate from institutions of postsecondary education. These participants will be able to escape the cycle of poverty and to take advantage in America's economic and social activities.

These programs all convey a common practice participants partake in listed below (Calvin, 1990):

- Instruction in reading, writing, study skills, and other subjects necessary for success in education beyond high school;
- Academic, financial, or personal counseling;
- Exposure to academic programs and cultural events;
- Tutorial services;
- Information on postsecondary education opportunities;
- Assistance in completing college entrance and financial aid applications;
- Assistance in preparing for college entrance exams;
Tours of college campuses after school, on Saturday’s and during the summer.

The Role of the Parent

It has been widely disseminated by scholars (Anderson, & Safar, 1972; Heller, 1969; Manuel, 1995) that one reason Mexican American children do not do well in school is that their parents do not support them in their academic endeavors. The school then assumes that Mexican-American parents do not care about the education of their children, and the children, in turn miss out on the benefits of a vigorous and positive relationship between the home and the school (Egeland, Carlson, & Sroufe, 1993).

So (1986), presented empirical data that suggests that Mexican-American parents do in fact have very high educational aspirations for their children. Using statistics from High School and beyond, study of high school students and their parents, So discovered that 57% of Mexican-American parents wanted their children to attend College. This compares favorably with the 54% of white parents who want their children to attend college.
Broadening the Concept of Education

For many years, education has simply been viewed as the knowledge obtained through learning. However, research during the past three decades has helped educators learn a great deal more about educating Mexican-American students:

- The Mexican-American experience needs to be included in the classroom. For example, famous Mexican-American personages should be studied, and the contributions of Mexican-Americans in the United States needs to be closely examined;
- Teachers cannot continue to look at the Mexican-American student as though he or she is culturally deprived. Mexican-American culture does not have to be glorified, but it does have to be respected by Anglo-American authorities;
- Standardized tests need to be developed and interpreted in an unbiased manner. More teaching materials need to be developed that are also ethnically and culturally unbiased;
- Curricula that speak to the Mexican-American experience are urgently needed. Mexican-American history, literature, psychology, and art can be incorporated into subject materials immediately;
Broadening the concept of education should also include the idea that many more Mexican-American teachers are needed at the elementary and secondary education levels;

Also many more Mexican-American faculty must be hired by universities to teach the teachers of the future.

A Brief Mexican-American History of High School Achievement

Studies have shown that "low Socio-Economic Status (SES) is strongly and consistently associated with poor academic performance" (National Research Council, 1993, p. 104). Youth of low SES are likely to live in low SES neighborhoods that are characterized by poor housing conditions, inadequate public and social services, and schools that lack sufficient funds to provide a high quality education. Any one of these factors may place low socioeconomic youth at risk of academic failure. A high proportion of Mexican-American children (41%) live in poverty compared to whites (13%) (Hechinger, 1992). Therefore, poverty is a risk factor that places a significant proportion of Mexican-Americans at risk for negative outcomes.
Mexican-Americans who are not living in poverty may still be at risk from adverse circumstances due to the stress associated with acculturation. Mexican-Americans may encounter stressful situations as they attempt to integrate two cultural backgrounds. The acculturation process is particularly difficult for individuals who immigrate to the United States after 12 years of age. Mena, Padilla, and Maldonado (1987) found that late immigrants experience greater acculturative stress in comparison to early immigrants. The facts that a high percentage of Mexican-Americans drop out of school affirms the existence of factors, like poverty and acculturation, increase academic risk and failure. Mexican-Americans have been noted to have the highest drop out rates in the United States (National Center for Educational Statistics, 1999). Historically, the Mexican-American population has had long standing record of poor academic achievement, which partially explains the under representation of Mexican-Americans in higher education (De la Rosa, 1990).

Establishing Basic Skills

The underachievement and academic failure of some Mexican-American students may be due to lack of ability, or basic skills. For the skills required to complete high
school and to succeed through college, one needs to be proficient in academic basic skills. These include reading, writing, and math. How is a student supposed to pass a history class if this student maintains a low reading level which makes it almost impossible to read the chapters, pass tests, and in turn receive a high mark in the class? Or maybe a student would like to take a chemistry class. This student will have an impossible time if they are unable to pass a basic algebra course.

These basic skills were identified by a panel of experts in the field of education throughout the years. Students are taught basic skills from elementary, middle school, and on through high school. This should prepare them for college. But what if the patterns of interaction between teachers and Mexican-American students play a major role in the educational experiences of these students?

De La Rosa (1990) found that teachers' disapproving behavior was related to students' academic proficiency. Teachers were more likely to direct disapproving responses toward Mexican-American students with limited English proficiency.

Valdivieso (1986) observed teacher interactions with Mexican-American and Anglo fourth and fifth grade students
who were matched on the basis of socioeconomic status, reading and math ability, and English proficiency. It was reported that Mexican-American students received less teacher affirmation following correct responses than their Anglo classmates did. Teacher affirmations were found to be correlated positively with academic achievement of students.

Differential patterns of interaction between teachers and students have also been reported by high school dropouts (Verdugo, 1986; Whitworth, 1983). In general, high school dropouts had less favorable evaluations of their schools climate and were more likely to report that teachers did not care for them and treated them in an unfair and arbitrary manner.

Disaffection can also result from a school climate marked by ethnic hostility, violence and prejudice. A qualitative study of Mexican-American students revealed that almost every student in the sample reported incidents of being called names, pushed or spat upon, deliberately tricked, teased, and laughed at because of their race, language difficulties, accent, or foreign dress (Whitworth, 1983). This happened throughout their many years of schooling.
Summary

A brief history of educational opportunities for underrepresented students was discussed. The role of the parent and broadening the concept of education was detailed. A brief history of Mexican-American high school achievement was also examined.

In creating a solid foundation in math, reading comprehension, and writing skills, students will possess the necessary mechanics to complete high school and go on to be successful in college.
CHAPTER THREE

METHODOLOGY

Introduction

Chapter Three details the steps used in developing the project. Specifically, the population served is discussed. Next, the curriculum development process including the resources used and content validation process is presented. Third, the estimated cost of this course is included, lastly an existing program is provided. The chapter concludes with a summary.

Population Served

This curriculum was developed specifically for the use of students entering the 9th grade at Eisenhower High School in the Rialto Unified School District. The curriculum however, is appropriate for any high school in the Rialto Unified School District, since it was developed in accordance with the Rialto Unified School District literacy guidelines. The curriculum guidelines used in this handbook were developed by the TRIO Programs which are employed at over 1,200 colleges, universities, and community colleges.
Curriculum Development

The next section of the project provides an overview of the curriculum development process. Specifically, the curriculum structure and content validation process is reviewed.

Curriculum Structure

This curriculum was developed in accordance with the outline put forward by the TRIO Program. This outline consists of the following: 1) academic advising; 2) tutorial and learning skills services; 3) college and career counseling; 4) parent/guardian meetings; 5) campus tours; and 6) summer programs.

Specific content revolves around enforcing basic reading comprehension and vocabulary, writing and critical thinking skills, math skills, computer skills, research, technological, and study skills.

Content Validation

To ensure that this curriculum guideline remains relevant, you may ask yourself, "How well do you read and write?" A student who is a poor reader is under a great handicap, because reading is the basic skill needed for all successful schoolwork (Aguirre, 1979). Reading does
more than help you in school. It opens the door to the wonderful world of books.

The better reader you are, the better student you can be, for studying is mainly the act of reading and thinking (Alva, 1991). As you go through high school, your reading ability must continue to grow if you are to keep up with required classwork (Aguirre, 1979). Instead of thinking of reading as a course that you finished in grade school, think of it as a skill that you can-and-should-keep on improving (Arias, 1986).

In the United States today, mastering mathematics has become more important than ever. Students with a strong grasp of mathematics have an advantage in academics and in the job market.

The 8th grade is a critical point in mathematics education (De La Rosa, 1990). Achievement at that stage clears the way for students to take rigorous high school mathematics and science courses, keys to college entrance and success in the labor force (Arias, 1986). However, most 8th and 9th grader Mexican-American students lag behind in their course taking that getting on the road to college is a long way off.
Budget

The estimated cost of this course per year is minimal. The major expenses will be campus tours and summer programs.

Existing Program

To bring about the desired changes in student attitudes and achievements, presently, the TRIO Programs for any disadvantaged student with a history of low income and who demonstrates the potential to obtain a baccalaureate degree including the following:

1. Academic Advising. These sessions provide participants with information on what classes and performance levels will help them to meet the eligibility requirements of the University of California, California State University, and other post secondary institutions. Next, the appropriate sequence in which they should take their courses and how to prepare for college admissions tests. The focus of these sessions is academic program planning, related high school work, and entrance examinations;

2. Tutorial and Learning Skill Services. These services furnish students with tutorial
assistance necessary to master the concepts in their college preparatory courses, especially those in mathematics, science and English. These services are designed to improve a student's proficiency in note-taking, asking questions, reading, studying, test-taking, and other skills;

3. College and Career Counseling. This service gives participants information on college admission procedures and examinations, career choices, financial aid and scholarship programs, housing, post secondary institutions of interest, college life, and the benefits of higher education;

4. Parent Meetings. These gatherings introduce students and their parents to a wide array of information vital to college preparation and career planning. Meetings with parents are conveniently scheduled in familiar community settings;

5. Campus tours. Such outings enable participants and their parents to tour local college or university campuses of interest. A campus tour of specific academic programs, physical
facilities and services, department presentation and lectures on the history, traditions, and goals of the visited campus;

6. Summer Programs. These are designed to place students in an academic setting where they may obtain instruction that sharpens those reading, writing, mathematics, and study skills needed for academic success at college. Social transition into college, orientation to campus resources, and proper incentives for using academic support services throughout their freshman year in college are looked at.

Expanded Curriculum Design

The core curriculum guideline was developed in accordance as a supplement with the outline put forward by the University of California, the California State University, and California independent post secondary institutions. As stated in Chapter One the need for improving Mexican-American students' academic prowess has been identified.

The competencies identified as essential to complete high school, gain entrance to college, and to become a success in the labor force were included in the
curriculum. Through a consensus of higher education groups the following outline was developed. The outline consists of the following: 1) lesson title; 2) lesson outline; 3) lesson objectives; 4) materials and equipment; 5) evaluation; 6) comprehension. The prerequisite for this course is to receive a non-passing score on the district proficiency exam in reading, writing, and/or math.

Course content (2 semester program)

1. Strategic Reading/Writing

   A. Guide to Improving Vocabulary
      a. Develop Understanding of Words
      b. Strange Words
      c. Modern Dictionary
      d. Greek and Latin Prefixes, Suffixes, and Roots
      e. Observe
      f. Expand Reading
      g. Take Time to Think

   B. Guide to Improvement in Reading
      a. Good Physical Condition
      b. Build Up Vocabulary
      c. Increase Rate of Reading
      d. Think As You Read
      e. Study Aids
2. Transition to Advanced Mathematics

A. Decimal Notation
   a. Decimals for Whole Numbers
   b. Decimals for Numbers Between Whole Numbers
   c. Estimating by Rounding Up or Rounding Down
   d. Estimating by Rounding to the Nearest
   e. Decimals for Simple Fractions
   f. Decimals for Mixed Numbers
   g. Negative Numbers
   h. Comparing Numbers
   i. Equal Fractions

B. Large and Small Numbers
   a. Multiplying by 10, 100...
   b. Powers
   c. Scientific Notation for Large Numbers
   d. Multiplying by 1/10, 1/100...
   e. Percent of a Quantity
   f. From Decimals to Fractions and Percents
   g. Circle Graphs
   h. More Powers of Ten
i. Scientific Notation for Small Numbers

C. Measurement
   a. Measuring Length
   b. Converting Lengths
   c. Weight and Capacity in the Customary System of Measurement
   d. The Metric System
   e. Converting Between Systems
   f. Measuring Angles
   g. Kinds of Angles
   h. Measuring Area
   i. Measuring Volume

D. Uses of Variables
   a. Order of Operations
   b. Describing Patterns with Variables
   c. Translating Words to Algebraic Expressions
   d. Evaluating Algebraic Expressions
   e. Parentheses
   f. Grouping Symbols
   g. Formulas
   h. Probability
   i. Inequalities

E. Patterns Leading to Addition
a. Models for Addition
b. Zero and Opposites
c. Rules for Adding Positive and Negative Numbers
d. Adding Positive and Negative Fractions
e. Adding Probabilities
f. Commutative and Associative Properties
g. Solving $x + a = b$
h. Polygons
i. Adding Lengths

F. Problem Solving Strategies
a. Being a Good Problem Solver
b. Read Carefully
c. Draw a Picture
d. Trial and Error
e. Make a Table

G. Patterns Leading to Subtraction
a. Two Models for Subtraction
b. Solving $x - a = b$
c. Angles and Lines
d. Angles and Parallel Lines
e. Special Quadrilaterals
f. Triangle Sum Property

H. Displays
a. Graphs and Other Displays
b. Bar Graphs
c. Coordinate Graphs
d. Graphing Lines
e. Reflections
f. Reflection Symmetry

I. Patterns Leading to Multiplication
a. Area Model for Multiplication
b. Volumes of Rectangular Solids
c. Multiplication of Fractions
d. Multiplying Probabilities
e. Rate Factor Model for Multiplication
f. Multiplication with Negative Numbers and Zero

J. Multiplication and Other Operations
a. Solving ax = b
b. Solving ax + b = c
c. Solving ax + b = c When a Is Negative
d. Distributive Property
e. Dimensions and Units
f. Areas of Triangles
g. Areas of Trapezoids

K. Patterns Leading to Division
a. Integer Division
b. Division of Fractions

c. Division with Negative Numbers

d. Proportions

e. Proportions in Similar Figures

f. Proportions Thinking

L. Real Numbers, Area and Volume

a. Converting Decimals to Fractions

b. Square Roots

c. The Pythagorean Theorem

d. Circumference of a Circle

e. Area of a Circle

f. Surface Areas of Cylinders and Prisms

g. Volumes of Cylinders and Prisms

h. Spheres

M. Coordinate Graphs and Equations

a. Graphing \( y = ax + b \)

b. Situations Leading to \( ax + b = cx = d \)

c. Solving \( ax + b = cx + d \)

d. Graphs of Formulas

e. Graphs of Equations with Symbols for Rounding

3. Freshman Seminar

A. Helpful Hints for Studying

B. Academic Advising
C. Tutorial and Learning Skill Services
D. College and Career Counseling
E. Parent Meetings
F. Campus Tours
G. Summer Programs

4. English I

A. Vocabulary Development
   a. Word Distinctions
   b. Development of a Critical Vocabulary
   c. Context Clues

B. Effective Sentences
   a. Problems of Grammar
   b. Problems of Meaning and Sense

C. Sentence Revision
   a. Omitting Unrelated Details
   b. Keeping Related Sentence Parts Together
   c. Coordinating Related Ideas
   d. Avoiding Faulty Coordination
   e. Avoiding Stringy Sentences
   f. Reducing Sentences to Make Them Effective
   g. Parallelism
   h. The Weak Passive
D. Sentence Clarity
   a. Avoiding Omissions of Necessary Words
   b. The Placement of Modifiers
   c. Avoiding Dangling Modifiers
   d. Avoiding Needless Shifts

E. Sentence Variety
   a. Of Sentence Beginnings
   b. Of Sentence Structure
   c. Of Sentence Length

F. The Paragraph: Its Structure
   a. Defining the Paragraph
   b. The Topic Sentence
   c. The Body of the Paragraph
   d. Concluding Sentence

G. The Paragraph: Its Other Elements
   a. Paragraph Unity
   b. Coherence
   c. Adequate Detail
   d. Tone
   e. Mood

H. Composition
   a. Choosing Subject
   b. Writing Down Ideas
   c. Organizing Ideas
d. Outlining

5. Algebra I

A. Polynomials
   a. Exponents
   b. Addition and Subtraction
   c. Multiplication
   d. Division

B. Factoring
   a. Greatest Common Factor and Factoring by Grouping
   b. Binomials
   c. Trinomials

I. Research Paper
   a. Choosing Subject
   b. Preparing a Working Bibliography
   c. Preparing a Preliminary Outline
   d. Reading and Taking Notes
   e. Organizing Notes and Writing Final Outline
   f. Writing First Draft
   g. Writing Final Draft with Footnotes
   h. Writing Final Bibliography
C. Rational Expressions
   a. Fundamental Principle of Rational Expressions
   b. Multiplication and Division
   c. Addition and Subtraction
   d. Complex Fractions

D. Using Linear Equations in One Variable
   a. Solving Linear Equations in One Variable
   b. Literal Equations and Formulas
   c. Applications
   d. Fractional Equations
   e. Absolute Value Equations
   f. Equations Containing Square Roots

E. Exponents and Radicals
   a. Negative Integer Exponents
   b. Roots and Radicals
   c. Operations with Radicals
   d. Rational Exponents
   e. Complex Numbers

F. Nonlinear Equations in One Variable
   a. Solutions by Factoring
   b. Completing the Square
   c. The Quadratic Formula
d. Equations of Higher Degree

e. Radical Equations

G. Inequalities in One Variable
   a. Linear Inequalities in One Variable
   b. Compound Inequalities
   c. Boundary Numbers and Absolute Value Inequalities
   d. Higher Degree and Fractional Inequalities

H. Equations in More than One Variable
   a. Cartesian Coordinate System
   b. Graph of $Ax + By = C$
   c. Slope
   d. Equations of Lines
   e. Variation

I. Systems of Equations
   a. Systems of Equations in Two Variables
   b. Linear Systems in More Than Two Variables
   c. Linear Inequalities in Two Variables
   d. Systems of Linear Inequalities in Two Variables

J. Conic Sections
   a. The Circle
b. The Parabola
c. The Ellipse and The Hyperbola
d. The General Second Degree Equation in Two Variables

K. Functions
   a. Definition of Function and Functional Notation
   b. Graphs of Functions
   c. Algebra of Functions
   d. Inverse Functions
   e. Exponential and Logarithmic Functions
   f. Properties of Logarithms

L. Other Topics
   a. Sequences
   b. Summation Notation
   c. Factorials and Binomial Coefficients
   d. The Binomial Theory
   e. Permutations and Combinations

Summary

This course was designed to primarily serve Mexican-American high school students who are at risk of being tracked into non academic programs. This is to provide real opportunities for students who are below
grade level to "catch up", academically, to increase the high school graduation rate of Mexican-American students, to enroll in and successfully complete a college preparatory program, and to increase the number of participants who become eligible for admission to college. The population this course is directed at is Mexican-American high school 9th grade students in the Rialto Unified School District. The cost of running this program should be low. This course would supersede the existing program, which is successful, but should include all Mexican-American students who need it, not just those students selected according to their potential for academic success.
CHAPTER FOUR
CONCLUSIONS AND RECOMMENDATIONS

Introduction
As a result of reviewing the literature and examining existing curriculum programs, a number of conclusions and recommendations were formed. The following conclusions and recommendations are presented.

Conclusions
In developing this project, the following conclusions were made:

• National data indicate that approximately four in ten Hispanics ages 18 to 24 were high school dropouts;
• Hispanic students are less likely to be placed in programs for gifted and talented children than are White or Black children;
• Hispanics are similarly underrepresented in high school honors classes;
• Hispanic high school seniors were the least likely to participate in honors mathematics and English courses;
Hispanics are disproportionately represented in remedial courses and low-level curriculum tracks;

- The current curriculum is valid, but needs to be expanded.

Recommendations

The following recommendations are made to fully implement current curriculum ideas.

- The curriculum be reviewed annually and updated as needed to ensure that the students are receiving the most current instruction possible to improve student learning.

- The curriculum serves as a model and one form of assessment of proficiency skills.

- Funds need to be set aside on an annual basis to insure implementation of project.

Summary

Conclusions and recommendations were formed as a result of reviewing the related literature and examining existing curriculums. These conclusions and recommendations extracted from this project were presented in this chapter.
Educational Development Curriculum
for Mexican-American High School Students
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INTRODUCTION TO THE EDUCATION PROJECT

The following project is divided into two sections: Section One: Description of Classes, and Section Two: Curriculum Guidelines. The Curriculum includes lesson outline, lesson objectives, materials and equipment, how students will be evaluated, and comprehension. The design of the coursework is sequential within each level. Students are provided with the necessary information, skills, and techniques to successfully complete high school and advance to the next level of study; college.
SECTION 1

DESCRIPTION

SECTION 1
Freshmen Achieving Success Together

Freshmen Achieving Success Together (F.A.S.T.) is an idea of a school-within-a-school organized around interdisciplinary teams designed to provide incoming ninth graders with a smooth transition into high school. This is a supplement to a ninth graders regular school schedule.

Four-Period Day

The schedule is organized around four 80-to-90 minute periods. Extended class periods allow for a greater variety of student-centered instructional approaches such as cooperative learning, projects, and simulations.

Common Core Curriculum

F.A.S.T. does not track students into college preparatory, vocational, or general curricular tracks. Instead, a basic set of college preparatory academic courses is required for all students across the four years of high school.

Extra Help

Students do not repeat failed courses during the regular school day. Summer School and after-hours Credit School are offered so students can recover from course failures and missed credits can be earned.

Freshmen are adolescents undergoing the difficult transition from middle school to high school. Schools can
ease the transition to high school, and help more students stay in school and earn promotion, by creating a Freshmen Achieving Success Together Program. A strong program serves as a bridge that spans the rough waters of adolescence, preparing students academically and socially for the rigors of high school and college.

**Double-Dose Curriculum in English and Math**

An effective curriculum must address the fact that many urban students enter ninth grade with very poor prior preparation in Math and English. Transition to Advanced Mathematics and Strategic Reading courses will help supplement regular Algebra and English courses, providing students with a double dose of instruction in Math and English.

**Career and College Awareness through Freshman Seminar**

A special ninth grade course, Freshman Seminar gives students the information they need to succeed in high school. Students learn the importance of credits, effective social and study skills, and keyboarding and basic computer literacy. They also develop a strong awareness of college and post-secondary options and explore the world of careers.
Freshman Curriculum

During the ninth grade, F.A.S.T. will provide students with an intensive academic experience designed to break the cycle of failure, which is epidemic in large, urban, non-selective high schools. Every freshman who needs it receives a double dose of Mathematics and English instruction. They take these subjects for 90 minutes a day for the entire year. All students also take a Freshman Seminar course designed to give them the social and study skills they need to succeed in high school and beyond.

Student Schedule in the F.A.S.T. Program

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<tr>
<th>FIRST SEMESTER</th>
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Strategic Reading/Writing

Balanced literacy course designed to provide ninth grade students, academically behind, a vehicle with specific reading strategies. Throughout the course, students learn how and when to use these strategies, gain ongoing experience with writing, and read relevant and authentic sources.
Transition to Advanced Mathematics

This course is designed to provide students with the motivation, skills, and approaches they need to succeed in Algebra and Geometry. The main topics covered include rational numbers, coordinate geometry, measurement, data, and variables and functions. Special emphasis is placed on developing students' abilities to call upon their informal mathematical knowledge, discuss their mathematical thinking, and problem solve.

Freshman Seminar

This is a course designed to give students the social and study skills they need to engage in active and contextual learning. It also introduces students to high school requirements and procedures, and demonstrates how school and schoolwork are related to adult life and success.

A Brief Mexican-American History of High School Achievement

Studies have shown that low socioeconomic status (SES) is strongly and consistently associated with poor academic performance. Youth of low SES are likely to live in low-SES neighborhoods that are characterized by poor housing conditions, inadequate public and social services, and schools that lack sufficient funds to provide a high
quality education. Any one of these factors may place low socioeconomic youth at risk of academic failure. A high proportion of Mexican-American children (41%) live in poverty compared to whites (13%). Therefore, poverty is a risk factor that places a significant proportion of Mexican-Americans at risk for negative outcomes.

Mexican-Americans who are not living in poverty may still be at risk from adverse circumstances due to the stress associated with acculturation. Mexican-Americans may encounter stressful situations as they attempt to integrate two cultural backgrounds. The acculturation process is particularly difficult for individuals who immigrate to the United States after 12 years of age. Studies have found that late immigrants experience greater acculturative stress in comparison to early immigrants. The facts that a high percentage of Mexican-Americans drop out of school affirms the existence of factors, like poverty and acculturation, increase academic risk and failure. Mexican-Americans have been noted to have the highest drop out rates in the United States. Historically, the Mexican-American population has had long standing record of poor academic achievement, which partially explains the under representation of Mexican-Americans in higher education.
Establishing Basic Skills

The underachievement and academic failure of some Mexican-American students may be due to lack of ability, or basic skills. For the skills required to complete high school and to succeed through college, one needs to be proficient in academic basic skills. These include reading, writing, and math. How is a student supposed to pass a history class if this student maintains a low reading level which makes it almost impossible to read the chapters, pass tests, and in turn receive a high mark in the class? Or maybe a student would like to take a chemistry class. This student will have an impossible time if they are unable to pass a basic algebra course.

These basic skills were identified by a panel of experts in the field of education throughout the years. Students are taught basic skills from elementary, middle school, and on through high school. This should prepare them for college. But what if the patterns of interaction between teachers and Mexican-American students play a major role in the educational experiences of these students?

One study found that teachers' disapproving behavior was related to students' academic proficiency. Teachers were more likely to direct disapproving responses toward
Mexican-American students with limited English proficiency.

Another study observed teacher interactions with Mexican-American and Anglo fourth and fifth grade students who were matched on the basis of socioeconomic status, reading and math ability, and English proficiency. It was reported that Mexican-American students received less teacher affirmation following correct responses than their Anglo classmates did. Teacher affirmations were found to be correlated positively with academic achievement of students.

Differential patterns of interaction between teachers and students have also been reported by high school dropouts. In general, high school dropouts had less favorable evaluations of their school's climate and were more likely to report that teachers did not care for them and treated them in an unfair and arbitrary manner.

Disaffection can also result from a school climate marked by ethnic hostility, violence and prejudice. A qualitative study of Mexican-American students revealed that almost every student in the sample reported incidents of being called names, pushed or spat upon, deliberately tricked, teased, and laughed at because of their race,
language difficulties, accent, or foreign dress. This happened throughout their many years of schooling.

**Developing Curriculum**

To ensure that this curriculum guideline remains relevant, you may ask yourself, "How well do you read and write?" A student who is a poor reader is under a great handicap, because reading is the basic skill needed for all successful schoolwork. Reading does more than help you in school. It opens the door to the wonderful world of books.

The better reader you are, the better student you can be, for studying is mainly the act of reading and thinking. As you go through high school, your reading ability must continue to grow if you are to keep up with required classwork. Instead of thinking of reading as a course that you finished in grade school, think of it as a skill that you can, and should keep on improving.

In the United States today, mastering mathematics has become more important than ever. Students with a strong grasp of mathematics have an advantage in academics and in the job market.

The 8th grade is a critical point in mathematics education. Achievement at that stage clears the way for students to take rigorous high school mathematics and
science courses, keys to college entrance and success in the labor force. However, most 8th and 9th grade Mexican-American students lag behind in their course-taking that getting on the road to college is a long way off.
SECTION 2
CURRICULUM GUIDELINES
Strategic Reading/Writing

Lesson Title: Guide to Improving Vocabulary

Lesson Outline:
1. Develop Understanding of Words
2. Strange Words
3. Modern Dictionary
4. Greek and Latin Prefixes, Suffixes, and Roots
5. Observe
6. Expand Reading
7. Take Time to Think

Lesson Objectives: Upon completion of this unit student will be able to:
1. Demonstrate developing understanding of words.
2. Demonstrate how to understand strange words.
3. Be familiar with modern dictionary.
4. Be familiar with Greek and Latin prefixes, suffixes, and roots.
5. Be familiar with observing.
6. Be familiar with expanding reading.
7. Be familiar with taking time to think.

Materials and Equipment:
Pen, paper, dictionary and textbook

Evaluation:
Demonstration of above objectives.

Comprehension:
All students will complete each lesson of this unit with 80% accuracy before proceeding to next unit.
Strategic Reading/Writing

Lesson Title: Guide to Improvement in Reading

Lesson Outline:

1. Make Sure in Good Physical Condition
2. Build Up Vocabulary
3. Increase Rate of Reading
4. Think As You Read
5. Study Aids
6. Develop Interest in Reading

Lesson Objectives: Upon completion of this unit student will be able to:

1. Know and demonstrate they are in good physical condition.
2. Demonstrate building up vocabulary.
3. Know and demonstrate how to increase rate of reading.
4. Know and demonstrate how to think as you read.
5. Be familiar with study aids.
6. Be familiar with developing interest in reading.

Materials and Equipment:
Pen, paper, study aids, and textbook.

Evaluation:
Demonstration of above objectives.

Comprehension:
All students will complete each lesson of this unit with 80% accuracy before proceeding to next unit.
Lesson Title: Decimal Notation

Lesson Outline:

1. Decimals for Whole Numbers
2. Decimals for Numbers Between Whole Numbers
3. Estimating by Rounding Up or Rounding Down
4. Estimating by Rounding to the Nearest
5. Decimals for Simple Fractions
6. Decimals for Mixed Numbers
7. Negative Numbers
8. Comparing Numbers
9. Equal Fractions

Lesson Objectives: Upon completion of this unit student will be able to:

1. Demonstrate knowledge of decimals for whole numbers.
2. Demonstrate knowledge of decimals for numbers between whole numbers.
3. Demonstrate knowledge of estimating by rounding up or rounding down.
4. Demonstrate knowledge of estimating by rounding to the nearest.
5. Demonstrate knowledge of decimals for simple fractions.
6. Demonstrate knowledge of decimals for mixed numbers.
7. Demonstrate knowledge of negative numbers.
8. Demonstrate knowledge of comparing numbers.
9. Demonstrate knowledge of equal fractions.

Materials and Equipment:
Pencil, paper, and textbook.

Evaluation:
Demonstration of above objectives.

Comprehension:
All students will complete each lesson of this unit with 80% accuracy before proceeding to next unit.
Lesson Title: Large and Small Numbers

Lesson Outline:

1. Multiplying by 10, 100...
2. Powers
3. Scientific Notation for Large Numbers
4. Multiplying by 1/10, 1/100...
5. Percent of a Quantity
6. From Decimals to Fractions and Percents
7. Circle Graphs
8. More Powers of Ten
9. Scientific Notation for Small Numbers

Lesson Objectives: Upon completion of this unit student will be able to:

1. Demonstrate knowledge of multiplying by 10, 100...
2. Demonstrate knowledge of powers.
3. Demonstrate knowledge of scientific notation for large numbers.
4. Demonstrate knowledge of multiplying by 1/10, 1/100...
5. Demonstrate knowledge of percent of a quantity.
6. Demonstrate knowledge of decimals to fraction and percents.
7. Demonstrate knowledge of circle graphs.
8. Demonstrate knowledge of more powers of ten.
9. Demonstrate knowledge of scientific notation for small numbers.

Materials and Equipment:
Pencil, paper, and textbook.

Evaluation:
Demonstration of above objectives.

Comprehension:
All students will complete each lesson of this unit with 80% accuracy before proceeding to next unit.
Lesson Title: Measurement

Lesson Outline:

1. Measuring Length
2. Converting Lengths
3. Weight and Capacity in the Customary System of Measurement
4. The Metric System
5. Converting Between Systems
6. Measuring Angles
7. Kinds of Angles
8. Measuring Area
9. Measuring Volume

Lesson Objectives: Upon completion of this unit student will be able to:

1. Demonstrate knowledge of measuring lengths.
2. Demonstrate knowledge of converting lengths.
3. Demonstrate knowledge of weight and capacity in the customary system of measurement.
4. Demonstrate knowledge of the metric system.
5. Demonstrate knowledge of converting between systems.
6. Demonstrate knowledge of measuring angles.
7. Demonstrate knowledge of kinds of angles.
8. Demonstrate knowledge of measuring area.

Materials and Equipment:
Pencil, paper, and textbook.

Evaluation:
Demonstration of above objectives.

Comprehension:
All students will complete each lesson of this unit with 80% accuracy before proceeding to next unit.
Lesson Title: Uses of Variables

Lesson Outline:

1. Order of Operations
2. Describing Patterns with Variables
3. Translating Words to Algebraic Expressions
4. Evaluating Algebraic Expressions
5. Parentheses
6. Grouping Symbols
7. Formulas
8. Probability
9. Inequalities

Lesson Objectives: Upon completion of this unit student will be able to:

1. Demonstrate knowledge of order of operation.
2. Demonstrate knowledge of describing patterns with variables.
3. Demonstrate knowledge of translating words to algebraic expressions.
4. Demonstrate knowledge of evaluating algebraic expressions.
5. Demonstrate knowledge of parentheses.
6. Demonstrate knowledge of grouping symbols.
7. Demonstrate knowledge of formulas.
8. Demonstrate knowledge of probability.
9. Demonstrate knowledge of inequalities.

Materials and Equipment:
Pencil, paper, and textbook.

Evaluation:
Demonstration of above objectives.

Comprehension:
All students will complete each lesson of this unit with 80% accuracy before proceeding to next unit.
Lesson Title: Patterns Leading to Addition

Lesson Outline:

1. Models for Addition
2. Zero and Opposites
3. Rules for Adding Positive and Negative Numbers
4. Adding Positive and Negative Fractions
5. Adding Probabilities
6. Commutative and Associative Properties
7. Solving $x + a = b$
8. Polygons
9. Adding Lengths

Lesson Objectives: Upon completion of this unit student will be able to:

1. Demonstrate knowledge of models for addition.
2. Demonstrate knowledge of zero and opposites.
3. Demonstrate knowledge of rules for adding positive and negative numbers.
4. Demonstrate knowledge of adding positive and negative fractions.
5. Demonstrate knowledge of adding probabilities.
6. Demonstrate knowledge of commutative and associative properties.
7. Demonstrate knowledge of solving $x + a = b$.
8. Demonstrate knowledge of polygons.
9. Demonstrate knowledge of adding lengths.

Materials and Equipment:
Pencil, paper, and textbook.

Evaluation:
Demonstration of above objectives.

Comprehension:
All students will complete each lesson of this unit with 80% accuracy before proceeding to next unit.
Lesson Title: Problem Solving Strategies

Lesson Outline:

1. Being a Good Problem Solver
2. Read Carefully
3. Draw a Picture
4. Trial and Error
5. Make a Table

Lesson Objectives: Upon completion of this unit student will be able to:

1. Demonstrate knowledge of being a good problem solver.
2. Demonstrate knowledge of how to read carefully.
3. Demonstrate knowledge of how to draw a picture.
4. Demonstrate knowledge of trial and error.
5. Demonstrate knowledge of how to make a table.

Materials and Equipment:
Pencil, paper, and textbook.

Evaluation:
Demonstration of above objectives.

Comprehension:
All students will complete each lesson of this unit with 80% accuracy before proceeding to next unit.
Lesson Title: Patterns Leading to Subtraction

Lesson Outline:

1. The Models for Subtraction
2. Solving \( x - a = b \)
3. Angles and Lines
4. Angles and Parallel Lines
5. Special Quadrilaterals
6. Triangle Sum Property

Lesson Objectives: Upon completion of this unit student will be able to:

1. Demonstrate knowledge of the models for subtraction.
2. Demonstrate knowledge of solving \( x - a = b \)
3. Demonstrate knowledge of angles and lines.
4. Demonstrate knowledge of angles and parallel lines.
5. Demonstrate knowledge of special quadrilaterals.
6. Demonstrate knowledge of triangle sum property.

Materials and Equipment:
Pencil, paper, and textbook.

Evaluation:
Demonstration of above objectives.

Comprehension:
All students will complete each lesson of this unit with 80% accuracy before proceeding to next unit.
Lesson Title: Displays

Lesson Outline:

1. Graphs and Other Displays
2. Bar Graphs
3. Coordinate Graphs
4. Graphing Lines
5. Reflection
6. Reflection Symmetry

Lesson Objectives: Upon completion of this unit student will be able to:

1. Demonstrate knowledge of graphs and other displays.
2. Demonstrate knowledge of bar graphs.
3. Demonstrate knowledge of coordinate graphs.
4. Demonstrate knowledge of graphing lines.
5. Demonstrate knowledge of reflection.
6. Demonstrate knowledge of reflection symmetry.

Materials and Equipment:
Pencil, paper, and textbook.

Evaluation:
Demonstration of above objectives.

Comprehension:
All students will complete each lesson of this unit with 80% accuracy before proceeding to next unit.
Lesson Title: Patterns Leading to Multiplication

Lesson Outline:

1. Area Model for Multiplication
2. Volumes of Rectangular Solids
3. Multiplication of Fractions
4. Multiplying Probabilities
5. Rate Factor Model for Multiplication
6. Multiplication with Negative Numbers and Zero

Lesson Objectives: Upon completion of this unit student will be able to:

1. Demonstrate knowledge of area model for multiplication.
2. Demonstrate knowledge of volumes of rectangular solids.
3. Demonstrate knowledge of multiplication of fractions.
4. Demonstrate knowledge of multiplying probabilities.
5. Demonstrate knowledge of rate factor model for multiplication.
6. Demonstrate knowledge of multiplication with negative numbers and zero.

Materials and Equipment:
Pencil, paper, and textbook.

Evaluation:
Demonstration of above objectives.

Comprehension:
All students will complete each lesson of this unit with 80% accuracy before proceeding to next unit.
Transition to Advanced Mathematics

Lesson Title: Multiplication and Other Operations

Lesson Outline:

1. Solving \( ax = b \)
2. Solving \( ax + b = c \)
3. Solving \( ax + b = c \) when \( a \) is negative
4. Distributive Property
5. Dimension and Units
6. Areas of Triangles
7. Areas of Trapezoids

Lesson Objectives: Upon completion of this unit student will be able to:

1. Demonstrate knowledge of solving \( ax = b \)
2. Demonstrate knowledge of solving \( ax + b = c \)
3. Demonstrate knowledge of solving \( ax + b = c \) when \( a \) is negative.
4. Demonstrate knowledge of distributive property.
5. Demonstrate knowledge of dimension and units.
6. Demonstrate knowledge of areas of triangles.
7. Demonstrate knowledge of areas of trapezoids.

Materials and Equipment:
Pencil, paper, and textbook.

Evaluation:
Demonstration of above objectives.

Comprehension:
All students will complete each lesson of this unit with 80% accuracy before proceeding to next unit.
Transition to Advanced Mathematics

Lesson Title: Patterns Leading to Division

Lesson Outline:

1. Integer Division
2. Division of Fractions
3. Division with Negative Numbers
4. Proportions
5. Proportions in Similar Figures
6. Proportions Thinking

Lesson Objectives: Upon completion of this unit student will be able to:

1. Demonstrate knowledge of integer division.
2. Demonstrate knowledge of division of fractions.
3. Demonstrate knowledge of division with negative numbers.
4. Demonstrate knowledge of proportions.
5. Demonstrate knowledge of proportions in similar figures.
6. Demonstrate knowledge of proportions thinking.

Materials and Equipment:
Pencil, paper, and textbook.

Evaluation:
Demonstration of above objectives.

Comprehension:
All students will complete each lesson of this unit with 80% accuracy before proceeding to next unit.
Transition to Advanced Mathematics

Lesson Title: Real Numbers, Area, and Volume

Lesson Outline:

1. Converting Decimals to Fractions
2. Square roots
3. The Pythagorean Theorem
4. Circumference of a Circle
5. Area of a Circle
6. Surface Areas of Cylinders and Prisms
7. Volumes of Cylinders and Prisms
8. Spheres

Lesson Objectives: Upon completion of this unit student will be able to:

1. Demonstrate knowledge of converting decimals to fractions.
2. Demonstrate knowledge of square roots.
3. Demonstrate knowledge of the pythagorean theorem.
4. Demonstrate knowledge of circumference of a circle.
5. Demonstrate knowledge of area of a circle.
6. Demonstrate knowledge of surface areas of cylinders and prisms.
7. Demonstrate knowledge of volumes of cylinders and prisms.
8. Demonstrate knowledge of spheres.

Materials and Equipment:
Pencil, paper, and textbook.

Evaluation:
Demonstration of above objectives.

Comprehension:
All students will complete each lesson of this unit with 80% accuracy before proceeding to next unit.
Lesson Title: Coordinate Graphs and Equations

Lesson Outline:
1. Graphing $y = ax + b$
2. Situations Leading to $ax + b = cx = d$
3. Solving $ax + b = cx + d$
4. Graphs of Formulas
5. Graphs of Equations with Symbols for Rounding

Lesson Objectives: Upon completion of this unit student will be able to:

1. Demonstrate knowledge of graphing $y = ax + b$
2. Demonstrate knowledge of situations leading to $ax + b = cx = d$
3. Demonstrate knowledge of solving $ax + b = cx + d$
4. Demonstrate knowledge of graphs of formulas.
5. Demonstrate knowledge of graphs of equations with symbols for rounding.

Materials and Equipment:
Pencil, paper, and textbook.

Evaluation:
Demonstration of above objectives.

Comprehension:
All students will complete each lesson of this unit with 80% accuracy before proceeding to next unit.
Lesson Title: Freshman Seminar

Lesson Outline:

1. Helpful Hint for Studying
2. Academic Advising
3. Tutorial and Learning Skill Services
4. College and Career Counseling
5. Parent Meetings
6. Campus Tours
7. Summer Programs

Lesson Objectives: Upon completion of this unit student will be able to:

1. Recognize and identify helpful hint for studying.
2. Recognize and identify academic advising.
3. Recognize and identify tutorial and learning skill services.
4. Recognize and identify college and career counseling.
5. Recognize and identify parent meetings.
6. Recognize and identify campus tours.
7. Recognize and identify summer programs.

Materials and Equipment:
Pen, paper, and handbooks.

Evaluation:
Demonstration of above objectives.

Comprehension:
All students will complete each lesson of this unit with 100% accuracy before proceeding to next unit.
Lesson Title: Vocabulary Development

Lesson Outline:

1. Word Distinctions
2. Development of a Critical Vocabulary
3. Context Clues

Lesson Objectives: Upon completion of this unit student will be able to:

1. Demonstrate knowledge of word distinctions.
2. Demonstrate knowledge of development of a critical vocabulary.
3. Demonstrate knowledge of context clues.

Materials and Equipment:
Pen, paper, and textbooks.

Evaluation:
Demonstration of above objectives.

Comprehension:
All students will complete each lesson of this unit with 80% accuracy before proceeding to next unit.
Lesson Title: Effective Sentences

Lesson Outline:
1. Problems of Grammar
2. Problems of Meaning and Sense

Lesson Objectives: Upon completion of this unit student will be able to:
1. Demonstrate knowledge of problems of grammar.
2. Demonstrate knowledge of problems of meaning and sense.

Materials and Equipment:
Pen, paper, and textbooks.

Evaluation:
Demonstration of above objectives.

Comprehension:
All students will complete each lesson of this unit with 80% accuracy before proceeding to next unit.
Lesson Title: Sentence Revision

Lesson Outline:
1. Omitting Unrelated Details
2. Keeping Related Sentence Parts Together
3. Coordinating Related Ideas
4. Avoiding Faulty Coordination
5. Avoiding Stringy Sentences
6. Reducing Sentences to Make Them Effective
7. Parallelism
8. The Weak Passive

Lesson Objectives: Upon completion of this unit student will be able to:
1. Demonstrate knowledge of omitting unrelated details.
2. Demonstrate knowledge of keeping related sentence parts together.
3. Demonstrate knowledge of coordinating related ideas.
4. Demonstrate knowledge of avoiding faulty coordination.
5. Demonstrate knowledge of avoiding stringy sentences.
6. Demonstrate knowledge of reducing sentences to make them effective.
7. Demonstrate knowledge of parallelism.
8. Demonstrate knowledge of the weak passive.

Materials and Equipment:
Pen, paper, and textbooks.

Evaluation:
Demonstration of above objectives.

Comprehension:
All students will complete each lesson of this unit with 80% accuracy before proceeding to next unit.
Lesson Title: Sentence Clarity

Lesson Outline:

1. Avoiding Omissions of Necessary Words
2. The Placement of Modifiers
3. Avoiding Dangling Modifiers
4. Avoiding Needless Shifts

Lesson Objectives: Upon completion of this unit student will be able to:

1. Demonstrate knowledge of avoiding omissions of necessary words.
2. Demonstrate knowledge of avoiding dangling modifiers.
3. Demonstrate knowledge of avoiding dangling modifiers.
4. Demonstrate knowledge of avoiding needless shifts.

Materials and Equipment:
Pen, paper, and textbooks.

Evaluation:
Demonstration of above objectives.

Comprehension:
All students will complete each lesson of this unit with 80% accuracy before proceeding to next unit.
English I

Lesson Title: Sentence Variety

Lesson Outline:

1. Of Sentence Beginnings
2. Of Sentence Structure
3. Of Sentence Length

Lesson Objectives: Upon completion of this unit student will be able to:

1. Demonstrate knowledge of sentence beginnings.
2. Demonstrate knowledge of sentence structure.
3. Demonstrate knowledge of sentence length.

Materials and Equipment:
Pen, paper, and textbooks.

Evaluation:
Demonstration of above objectives.

Comprehension:
All students will complete each lesson of this unit with 80% accuracy before proceeding to next unit.
Lesson Title: The Paragraph: Its Structure

Lesson Outline:

1. Defining the Paragraph
2. The Topic Sentence
3. The Body of the Paragraph
4. Concluding Sentence

Lesson Objectives: Upon completion of this unit student will be able to:

1. Demonstrate knowledge of defining the paragraph.
2. Demonstrate knowledge of the topic sentence.
3. Demonstrate knowledge of the Body of the Paragraph
4. Demonstrate knowledge of concluding sentence.

Materials and Equipment:
Pen, paper, and textbooks.

Evaluation:
Demonstration of above objectives.

Comprehension:
All students will complete each lesson of this unit with 80% accuracy before proceeding to next unit.
English I

Lesson Title: The Paragraph: Its Other Elements

Lesson Outline:

1. Paragraph Unity
2. Coherence
3. Adequate Detail
4. Tone
5. Mood

Lesson Objectives: Upon completion of this unit student will be able to:

1. Demonstrate knowledge of paragraph unity.
2. Demonstrate knowledge of coherence.
3. Demonstrate knowledge of adequate detail.
4. Demonstrate knowledge of tone.
5. Demonstrate knowledge of mood.

Materials and Equipment:
Pen, paper, and textbooks.

Evaluation:
Demonstration of above objectives.

Comprehension:
All students will complete each lesson of this unit with 80% accuracy before proceeding to next unit.
Lesson Title: Composition

Lesson Outline:
1. Choosing Subject
2. Writing Down Ideas
3. Organizing Ideas
4. Outlining
5. Writing First Draft
6. Revision

Lesson Objectives: Upon completion of this unit student will be able to:
1. Demonstrate knowledge of choosing subject.
2. Demonstrate knowledge of writing down ideas.
3. Demonstrate knowledge of organizing ideas.
4. Demonstrate knowledge of outlining.
5. Demonstrate knowledge of writing first draft.
6. Demonstrate knowledge of revision.

Materials and Equipment:
Pen, paper, and textbooks.

Evaluation:
Demonstration of above objectives.

Comprehension:
All students will complete each lesson of this unit with 80% accuracy before proceeding to next unit.
Lesson Title: Research Paper

Lesson Outline:

1. Choosing Subject
2. Preparing a Working Bibliography
3. Preparing a Preliminary Outline
4. Reading and Taking Notes
5. Organizing Notes and Writing Final Outline
6. Writing First Draft
7. Writing Final Draft with Footnotes
8. Writing Final Bibliography

Lesson Objectives: Upon completion of this unit student will be able to:

1. Demonstrate knowledge of choosing subject.
2. Demonstrate knowledge of preparing a working bibliography.
3. Demonstrate knowledge of preparing a preliminary outline.
4. Demonstrate knowledge of reading and taking notes.
5. Demonstrate knowledge of organizing notes and writing final outline.
6. Demonstrate knowledge of writing first draft.
7. Demonstrate knowledge of writing final draft with footnotes.
8. Demonstrate knowledge of writing final draft with bibliography.

Materials and Equipment:
Pen, paper, and textbooks.

Evaluation:
Demonstration of above objectives.

Comprehension:
All students will complete each lesson of this unit with 80% accuracy before proceeding to next unit.
Algebra I

Lesson Title: Polynomials

Lesson Outline:

1. Exponents
2. Addition and Subtraction
3. Multiplication
4. Division

Lesson Objectives: Upon completion of this unit student will be able to:

1. Demonstrate knowledge of exponents.
2. Demonstrate knowledge of addition and subtraction.
3. Demonstrate knowledge of multiplication.
4. Demonstrate knowledge of division.

Materials and Equipment:
Pencil, paper, and textbook.

Evaluation:
Demonstration of above objectives.

Comprehension:
All students will complete each lesson of this unit with 80% accuracy before proceeding to next unit.
Algebra I

Lesson Title: Factoring

Lesson Outline:
1. Greatest Common Factor and Factoring by Grouping
2. Binomials
3. Trinomials

Lesson Objectives: Upon completion of this unit student will be able to:
1. Demonstrate knowledge of greatest common factor and factoring by grouping.
2. Demonstrate knowledge of binomials.
3. Demonstrate knowledge of trinomials.

Materials and Equipment:
Pencil, paper, and textbook.

Evaluation:
Demonstration of above objectives.

Comprehension:
All students will complete each lesson of this unit with 80% accuracy before proceeding to next unit.
Algebra I

Lesson Title: Rational Expressions

Lesson Outline:

1. Fundamental Principle of Rational Expressions
2. Multiplication and Division
3. Addition and Subtraction
4. Complex Fractions

Lesson Objectives: Upon completion of this unit student will be able to:

1. Demonstrate knowledge of fundamental principle of rational expressions.
2. Demonstrate knowledge of multiplication and division.
3. Demonstrate knowledge of addition and subtraction.
4. Demonstrate knowledge of complex fractions.

Materials and Equipment:
Pencil, paper, and textbook.

Evaluation:
Demonstration of above objectives.

Comprehension:
All students will complete each lesson of this unit with 80% accuracy before proceeding to next unit.
Lesson Title: Using Linear Equations in One Variable

Lesson Outline:

1. Solving Linear Equations in One Variable
2. Literal Equations and Formulas
3. Applications
4. Fractional Equations
5. Absolute Value Equations
6. Equations Containing Square Roots

Lesson Objectives: Upon completion of this unit student will be able to:

1. Demonstrate knowledge of solving linear equations in one variable.
2. Demonstrate knowledge of literal equations and formulas.
3. Demonstrate knowledge of applications fractional equations.
4. Demonstrate knowledge of fractional equations.
5. Demonstrate knowledge of absolute value equations.
6. Demonstrate knowledge of equations containing square roots.

Materials and Equipment:
Pencil, paper, and textbook.

Evaluation:
Demonstration of above objectives.

Comprehension:
All students will complete each lesson of this unit with 80% accuracy before proceeding to next unit.
Lesson Title: Exponents and Radicals

Lesson Outline:

1. Negative Integer Exponents
2. Roots and Radicals
3. Operations with Radicals
4. Rational Exponents
5. Complex Numbers

Lesson Objectives: Upon completion of this unit student will be able to:

1. Demonstrate knowledge of negative integer exponents.
2. Demonstrate knowledge of roots and radicals.
3. Demonstrate knowledge of operations with radicals.
4. Demonstrate knowledge of rational exponents.
5. Demonstrate knowledge of complex numbers.

Materials and Equipment:
Pencil, paper, and textbook.

Evaluation:
Demonstration of above objectives.

Comprehension:
All students will complete each lesson of this unit with 80% accuracy before proceeding to next unit.
Lesson Title: Nonlinear Equations in One Variable

Lesson Outline:
1. Solutions by Factoring
2. Completing the Square
3. The Quadratic Formula
4. Equations of Higher Degree
5. Radical Equations

Lesson Objectives: Upon completion of this unit student will be able to:
1. Demonstrate knowledge of solutions by factoring.
2. Demonstrate knowledge of completing the square.
3. Demonstrate knowledge of the quadratic formula.
4. Demonstrate knowledge of equations of higher degree.
5. Demonstrate knowledge of radical equations.

Materials and Equipment:
Pencil, paper, and textbook.

Evaluation:
Demonstration of above objectives.

Comprehension:
All students will complete each lesson of this unit with 80% accuracy before proceeding to next unit.
Algebra I

Lesson Title: Inequalities in One Variable

Lesson Outline:
1. Linear Inequalities in One Variable
2. Compound Inequalities
3. Boundary Numbers and Absolute Value Inequalities
4. Higher Degree and Fractional Inequalities

Lesson Objectives: Upon completion of this unit student will be able to:
1. Demonstrate knowledge of linear inequalities in one variable.
2. Demonstrate knowledge of compound inequalities.
3. Demonstrate knowledge of boundary numbers and absolute value inequalities.
4. Demonstrate knowledge of higher degree and fractional inequalities.

Materials and Equipment:
Pencil, paper, and textbook.

Evaluation:
Demonstration of above objectives.

Comprehension:
All students will complete each lesson of this unit with 80% accuracy before proceeding to next unit.
Algebra I

Lesson Title: Equations in More than One Variable

Lesson Outline:

1. Cartesian Coordinate System
2. Graph of $Ax + By = C$
3. Slope
4. Equations of Lines
5. Variation

Lesson Objectives: Upon completion of this unit student will be able to:

1. Demonstrate knowledge of cartesian coordinate system.
2. Demonstrate knowledge of how to graph of $Ax + By = C$
3. Demonstrate knowledge of the slope.
4. Demonstrate knowledge of equations of lines.
5. Demonstrate knowledge of variation.

Materials and Equipment:
Pencil, paper, and textbook.

Evaluation:
Demonstration of above objectives.

Comprehension:
All students will complete each lesson of this unit with 80% accuracy before proceeding to next unit.
Lesson Title: Systems of Equations

Lesson Outline:

1. Systems of Equations in Two Variables
2. Linear Systems in More Than Two Variables
3. Linear Inequalities in Two Variables
4. Systems of Linear Inequalities in Two Variables

Lesson Objectives: Upon completion of this unit student will be able to:

1. Demonstrate knowledge of systems of equations in two variables.
2. Demonstrate knowledge of linear systems in more than two variables.
3. Demonstrate knowledge of linear inequalities in two variables.
4. Demonstrate knowledge of systems of linear inequalities in two variables.

Materials and Equipment:
Pencil, paper, and textbook.

Evaluation:
Demonstration of above objectives.

Comprehension:
All students will complete each lesson of this unit with 80% accuracy before proceeding to next unit.
Lesson Title: Conic Sections

Lesson Outline:

1. The Circle
2. The Parabola
3. The Ellipse and The Hyperbola
4. The General Second Degree Equation in Two Variables

Lesson Objectives: Upon completion of this unit student will be able to:

1. Demonstrate knowledge of the circle.
2. Demonstrate knowledge of the parabola.
3. Demonstrate knowledge of the ellipse and the hyperbola.
4. Demonstrate knowledge of the general second degree equation in two variables.

Materials and Equipment:
Pencil, paper, and textbook.

Evaluation:
Demonstration of above objectives.

Comprehension:
All students will complete each lesson of this unit with 80% accuracy before proceeding to next unit.
Lesson Title: Functions

Lesson Outline:

1. Definition of Function and Functional Notation
2. Graphs of Functions
3. Algebra of Functions
4. Inverse of Functions
5. Exponential and Logarithmic Functions
6. Properties of Logarithms

Lesson Objectives: Upon completion of this unit student will be able to:

1. Demonstrate knowledge of definition of function and functional notation.
2. Demonstrate knowledge of graphs of functions.
3. Demonstrate knowledge of algebra of functions.
4. Demonstrate knowledge of inverse of functions.
5. Demonstrate knowledge of exponential and logarithmic functions.
6. Demonstrate knowledge of properties of logarithms

Materials and Equipment:
Pencil, paper, and textbook.

Evaluation:
Demonstration of above objectives.

Comprehension:
All students will complete each lesson of this unit with 80% accuracy before proceeding to next unit.
Algebra I

Lesson Title: Other Topics

Lesson Outline:

1. Sequences
2. Summation Notation
3. Factorials and Binomial Coefficients
4. The Binomial Theory
5. Permutations and Combinations

Lesson Objectives: Upon completion of this unit student will be able to:

1. Demonstrate knowledge of sequences.
2. Demonstrate knowledge of summation notation.
3. Demonstrate knowledge of factorials and binomial coefficients.
4. Demonstrate knowledge of the binomial theory.
5. Demonstrate knowledge of permutations and combinations.

Materials and Equipment:
Pencil, paper, and textbook.

Evaluation:
Demonstration of above objectives.

Comprehension:
All students will complete each lesson of this unit with 80% accuracy before proceeding to next unit.
CURRICULUM REFERENCES


REFERENCES


