

Math. Deficiency Among Incoming Students

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Introduction

This work presents the situation of Venezuelan students regarding math skills and general knowledge, when entering the Universities. we analyze current situation and what institutions are doing to improve it. In addition, we present the current situation in two Universities, a private and public one.

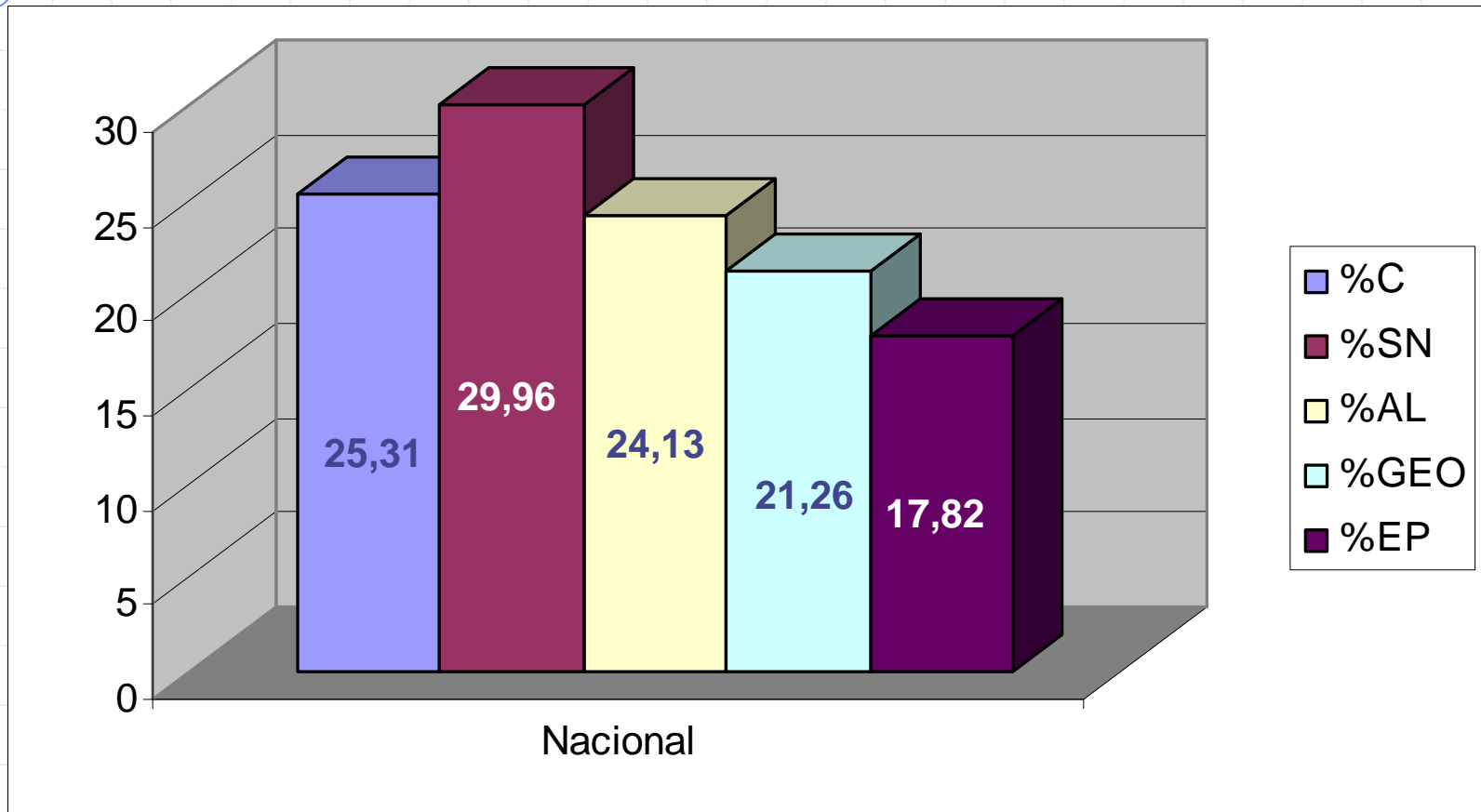
National Official Proficiency test

◆ Measures

- General Knowledge Skills
- **Math Skills**
- **Math comprehension versus application ability**
- Verbal abilities
- Reading abilities

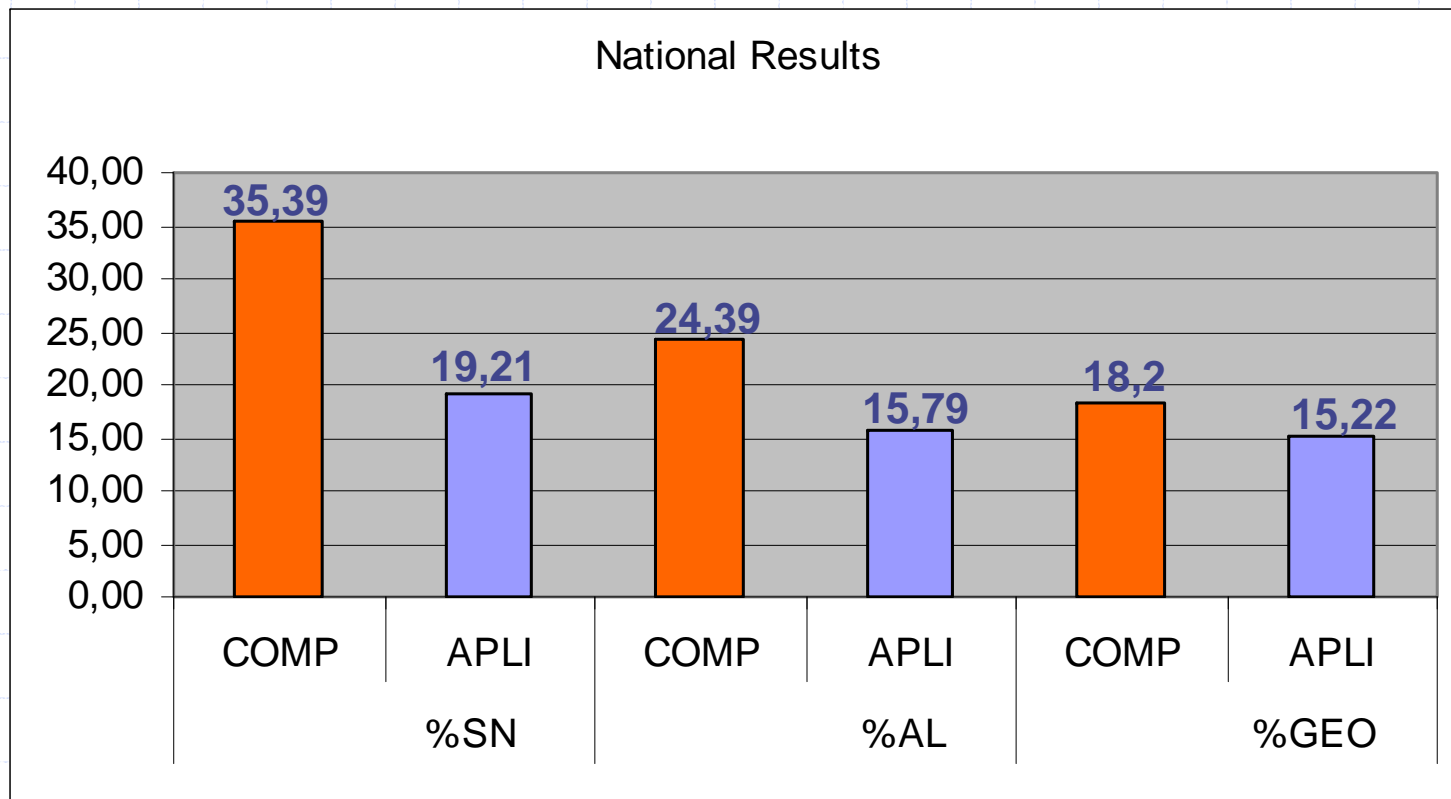
◆ Gives Universities a standardized measure

2005 National Statistics



Muestra: 301811 Estudiantes

Comprehension vs Applicability



2005 National Statistics

◆ Regarding Math Skills they show:

- ◆ Arithmetics, No proficiency in elementary operations
- ◆ Deficiencies in algebraic abilities: factoring, resolution of equations of first grade, remarkable products, radication, functional elementary operations, elementary problems of application.
- ◆ Ignorance of the basic concepts in Geometry
- ◆ Ignorance of the basic concepts of Probability and Statistic
- ◆ Failure in ability solve mathematical problems

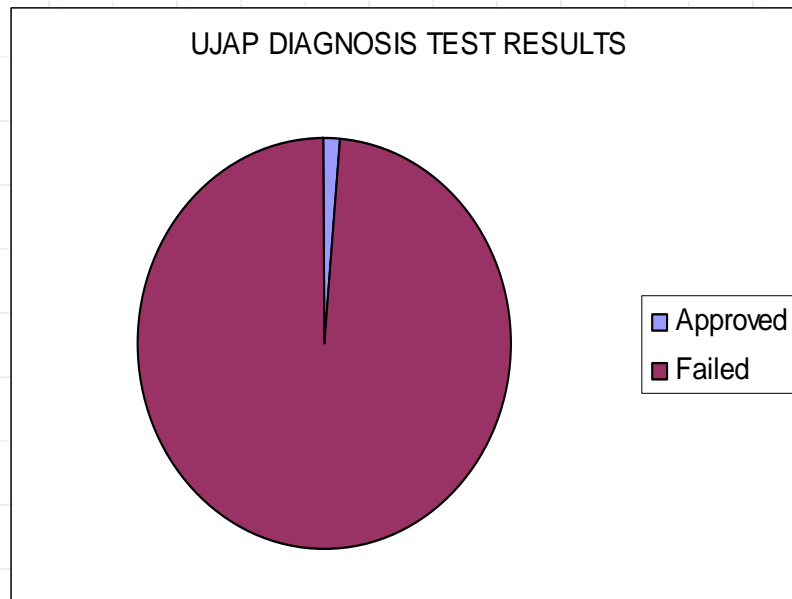
Universidad José Antontio Páez UJAP

- ◆ The UJAP was founded 7 years ago and has a student body of 6.000
- ◆ UJAP offers careers that require math skills proficiency
- ◆ Requires that students take a diagnosis test
- ◆ Introductory Course to close the gaps
 - Mathematics
 - Language
 - Orientation

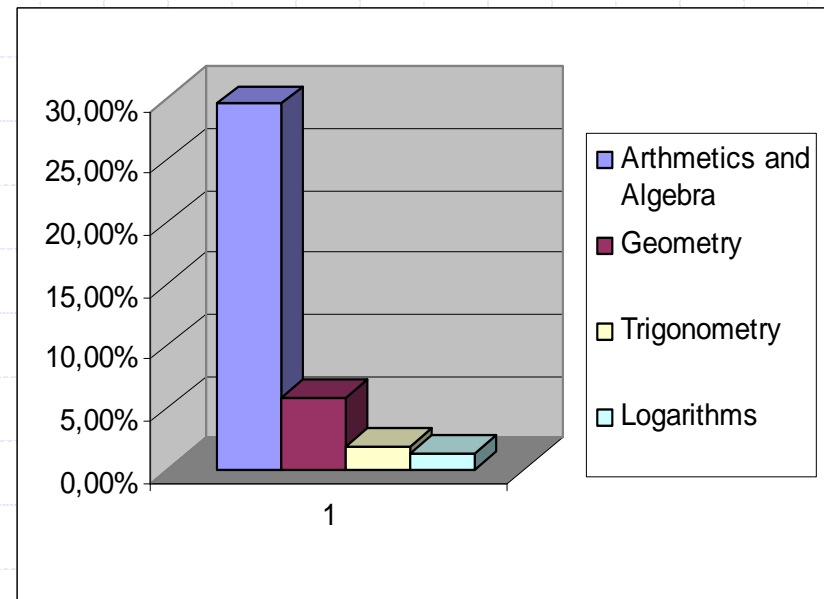
UJAP 2004 Statistics

Percentage of Applicants' that approved the diagnoses test	1.33%
Percentage of applicants' that failed the test	98.67%
They responded the arithmetic questions and algebra correctly.	29.49%
They responded the questions of Geometry correctly	5.77%
They responded the questions of Trigonometry correctly	1.92%
They responded the questions of Logarithms correctly	1.28%

UJAP 2004 Statistics



Approved	1,33%
Failed	98,67%



Arithmetics and Algebra	29,49%
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UJAP Conclusions

- ◆ What are we doing with these results
 - we are in conversations with those institutions to give them our findings of the mathematical deficiencies of their graduates and offer them training shops, improvement work shops, Motivational assessment, to the educational staff of that Institution. Teachers Salary
- ◆ **Why focus on the Educator?**
 - *the angular stone of the teaching - learning process*

Causes of these deficiencies

- ◆ Teachers General knowledge
- ◆ Motivation
- ◆ Teachers Salary
- ◆ Work Environment
- ◆ Work Schedule
- ◆ Teaching Career Admission Levels
- ◆ Curriculum level

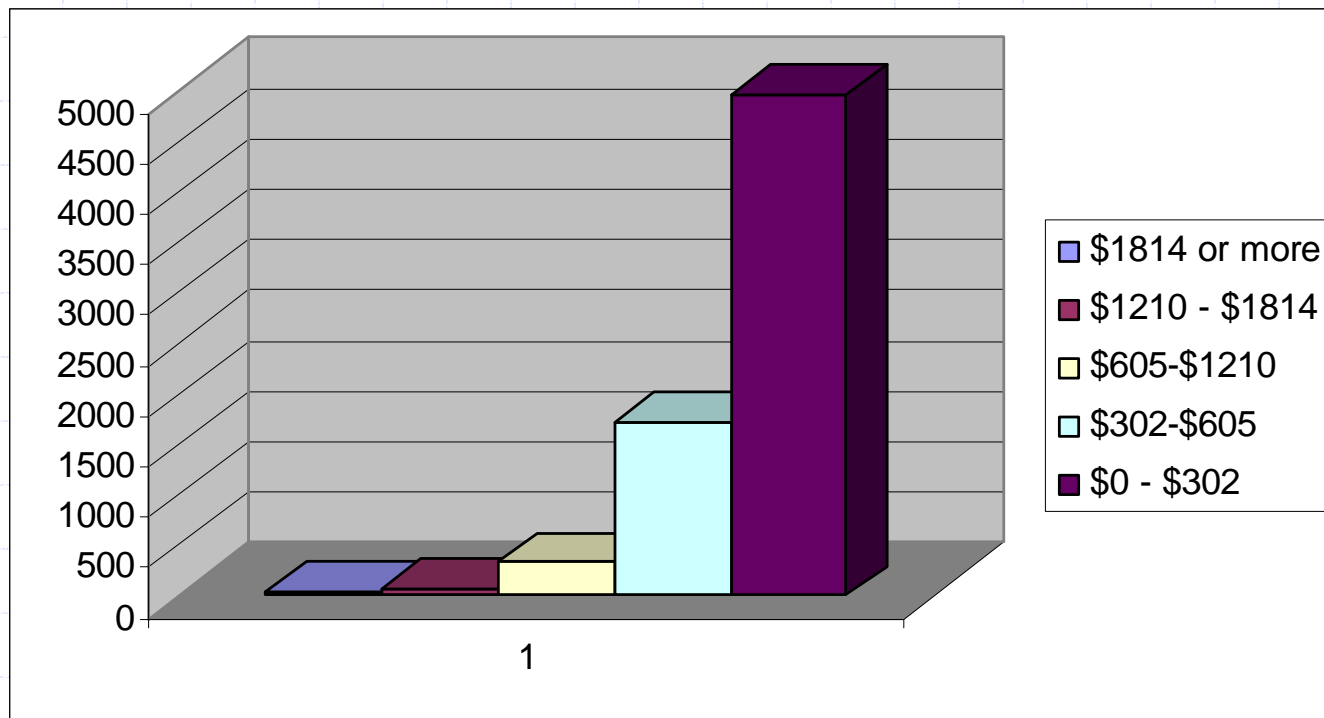
Universidad Pedagógica Experimental Libertador

- ◆ Founded in 1983
- ◆ Current Student Body 45000
- ◆ Teaching Careers
 - Pre-School
 - Elementary
 - High School
 - University
- ◆ Specialties: Mathematics, Science and Languaje among others
- ◆ 8 Institutes spread all over the country
 - Instituto Pedagógico Maracay (Dean Raul López)

Curriculum

CURSOS	UC	REQUISITOS
Introduction to Algebra	3	
Numerical Systems	3	Introduction to Algebra
Plane and space Geometry I	3	
Plane and space Geometry II	3	Plane and space Geometry I
Calculo diferencial de funciones de una variable real	3	
Calculo Integral de funciones de una variable real	3	Calculo diferencial de funciones de una variable real
Introduction to Linear Algebra	3	Numerical Systems
Fundamentos de Informatica	3	
Calculo Diferencial e Integral de funciones de varias variables	4	Calculo Integral de funciones de una variable real
Probabilidad y Estadística Inferencial	4	Calculo Diferencial e Integral de funciones de varias variables
Mathematics Education	3	Probabilidad y Estadística Inferencial. Plane and space Geometry II. Introduction to Linear Algebra
Ordinary Differential Equations	3	Calculo Diferencial e Integral de funciones de varias variables
Linear Algebra	4	Introduction to Linear Algebra
Mathematical Analysis I	3	Calculo Diferencial e Integral de funciones de varias variables

Family income 2004 UPEL applicants



\$1814 or more	40
\$1210 - \$1814	64
\$605-\$1210	328
\$302-\$605	1719
\$0 - \$302	4956

Conclusión

- ◆ Change Schedule
- ◆ Work Environment improvement.
 - Better facilities
 - Technological support
- ◆ Competitive Salary
- ◆ Improve Curriculum
- ◆ Continuous evaluation of teaching staff
- ◆ Performance Measurements and rewards

Questions?

