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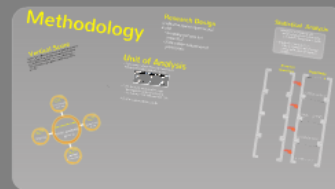
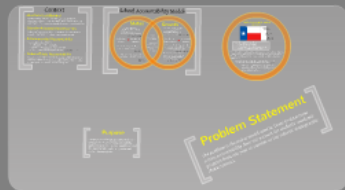
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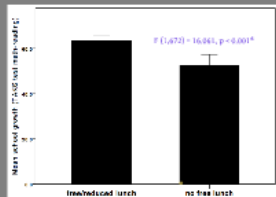
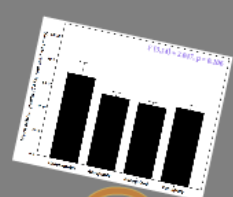
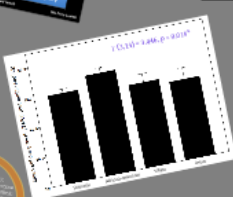
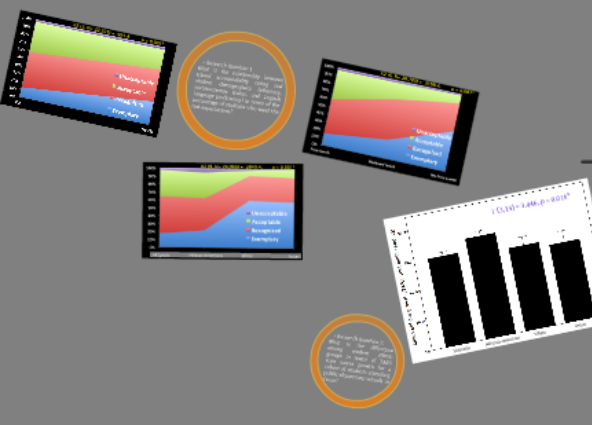
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## Accountability Based on Standardized Testing in Elementary Schools, Texas: Toward a Systemic Approach That Integrates Students' Academic Improvement and Schools' Demographics Variables

Felipe Sepulveda, Dr. Christie Bledsoe, Dr. Marlene Zipperlen & Dr. Robert Rose



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# Accountability Based on Standardized Testing in Elementary Schools, Texas: Toward a Systemic Approach That Integrates Students' Academic Improvement and Schools' Demographics Variables

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# Context

- **No Child Left Behind**

The No Child Left Behind Act (2002) is a standard based educational reform. It requires students to be annually tested against predefined academic standards on the core content areas.

- **Standards-based Assessments**

School performance is defined in terms of the proportion of students meeting or exceeding proficiency standards.

- **Consequential Accountability**

Accountability mechanism:

- Explicit, publicized standards
- Regular testing against those standards
- Consequences linked to performance (Kress et al., 2011)

- **Federal/State Accountability**

Based on the current accountability system all the students are required to demonstrate grade level proficiency regardless the students' prior academic and social background.

# School Accountability Models

## Status

- Status model reflect the proportion of students who are at specific levels of achievement on a given scale  
(Marzano & Waters, 2009)
- High Test Scores = Academic success
- Outcome based system drives away intrinsic motivation  
(Jensen, 2008)
- People work only to the point that triggers the reward and no further  
(Pink, 2009)

## Growth

- Considers the student prior achievement to have a better understanding of current achievement  
(Betebenner, 2009)
- Academic Improvement = Academic success
- Students are challenged towards continuous improvement triggering internal motivators to learn  
(Maleyko & Gawlik, 2011)
- Teachers and administrators provide equal attention to low-high achievers, not centered mainly in "bubble kids"  
(Sternberg & Lubart, 2011)

- Use of Standard-Based Assessments
- Hold schools and teacher accountable for students' performance

## TEXAS Accountability System 2004-2011



Accountability based on Status Model :

- Sub populations are considered
- Students growth is not considered
- School with high populations of students at risk may be punished when the rank is assigned

- A school that barely showed academic progress may keep a better rating (e.g. recognized or exemplary) since high proportion of the student population meet the test standard.
- A school that showed progress from one year to another may keep the unacceptable or acceptable rate.
  - Current-status approach does not provide a scientifically basis for concluding that one school is more effective than another. (Linn, 2008)
  - Students' performance on standardized assessment might be significantly determined by a set of academic and social related co-variables acting in concert to define the student's academic performance.

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# Problem Statement

The problem is the status model used in Texas to determine school accountability does not account for students' academic progress from one year to another or the schools' demographic characteristics.

# Purpose

The purpose of this quantitative study is to compare the Texas school accountability approach based on a status model to a model that incorporates academic growth and student demographics.



# Methodology

**Vertical Score**  
The vertical scale provides a way to compare students' performance to the existing academic achievement standards at each grade level, and additionally to students' progression from one grade to

**Unit**

- Participants:  
Independent

# Research Design

Qualitative, Quasi-experimental  
model

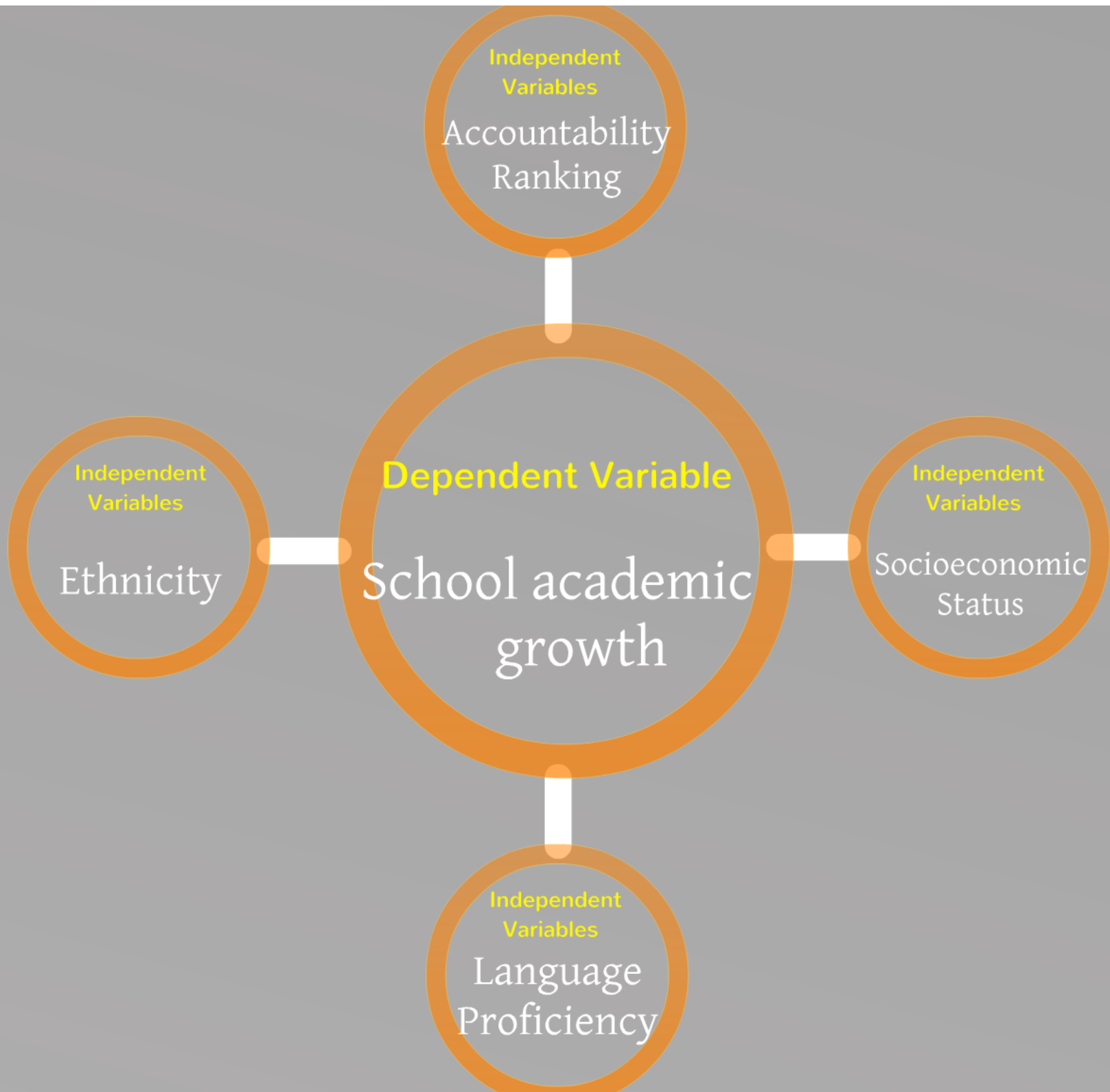
- Grouping patterns not controlled
- Nonrandom assignment of participants

# Unit of Analysis

- Participants: Schools from the three largest Independent School Districts in Texas.

School Rating	Number Schools	Number Students
Exemplary	78	5,740
Recognized	174	10,471
Acceptable	130	7,156
Unacceptable	16	698
<b>TOTAL</b>	<b>398</b>	<b>24,065</b>

- TAKS Vertical Score School Average:
  - Reading 2010 (4th) and 2011 (5th)
  - Mathematics 2010 (4th) and 2011 (5th)
- School average academic growth



Independent Variables

Accountability  
Ranking

Independent Variables

Ethnicity

Independent Variables

Socioeconomic  
Status

Independent Variables

Language  
Proficiency

Dependent Variable

School academic  
growth

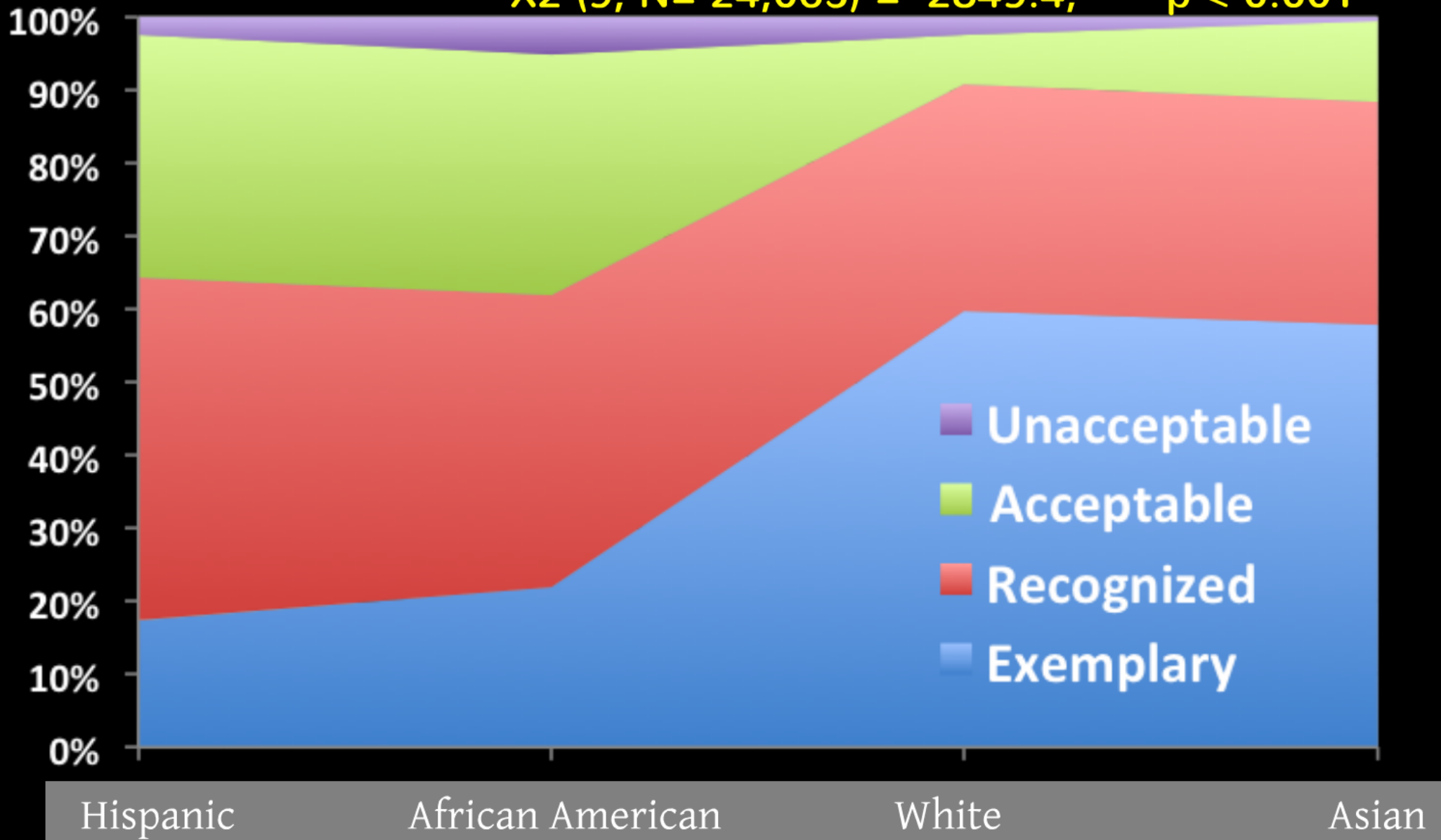
# Statistical Analysis

- Contingency Table (Chi-Square)
  - Relationship between school rating and students' demographic variables
- Analysis of Variance (ANOVA)
  - Difference between school average growth and students demographic variables

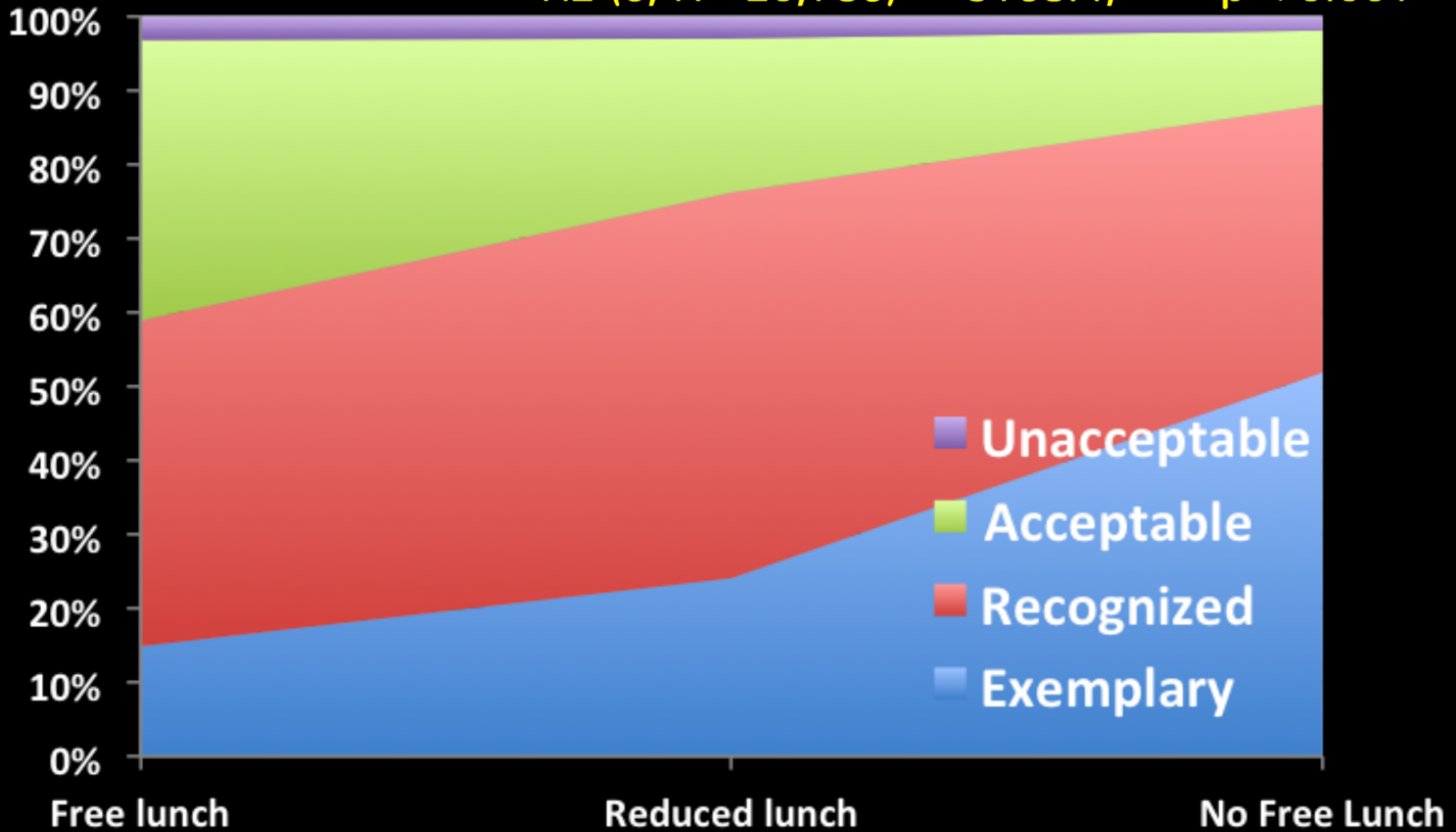
- Research Question 1

What is the relationship between school accountability rating and student demographics (ethnicity, socioeconomic status, and English language proficiency) in terms of the percentage of students who meet the test expectations?

$\chi^2 (9, N = 24,065) = 2849.4, p < 0.001^*$



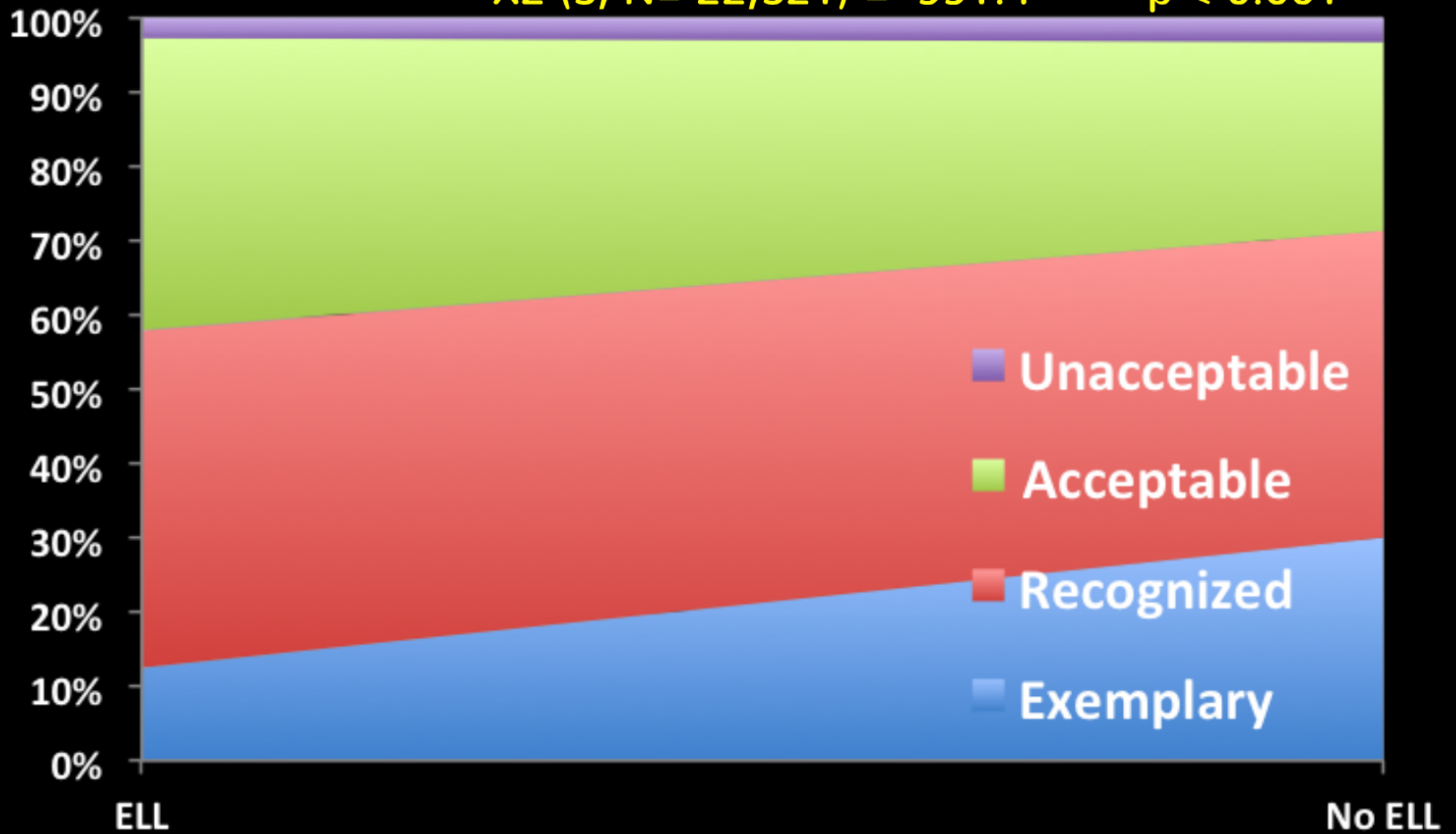
$\chi^2 (6, N= 20,785) = 3168.4, \quad p < 0.001^*$

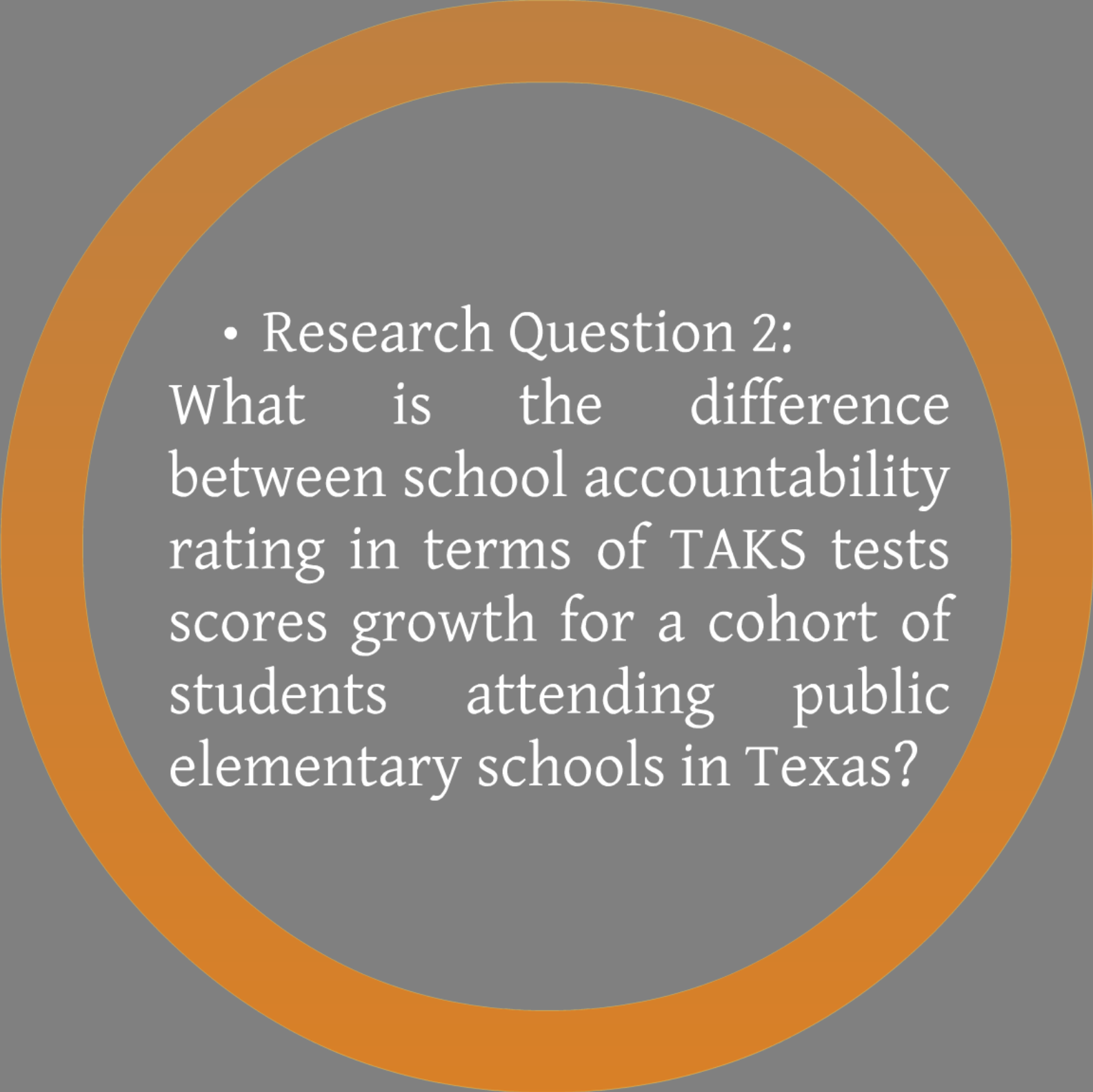




$\chi^2 (3, N= 22,321) = 991.4$

$p < 0.001^*$





• Research Question 2:  
What is the difference  
between school accountability  
rating in terms of TAKS tests  
scores growth for a cohort of  
students attending public  
elementary schools in Texas?

$F(3,14) = 2.047, p = 0.106$

Mean school growth (TAKS test math-reading)

100.0  
80.0  
60.0  
40.0  
20.0  
0.0

Unacceptable

Acceptable

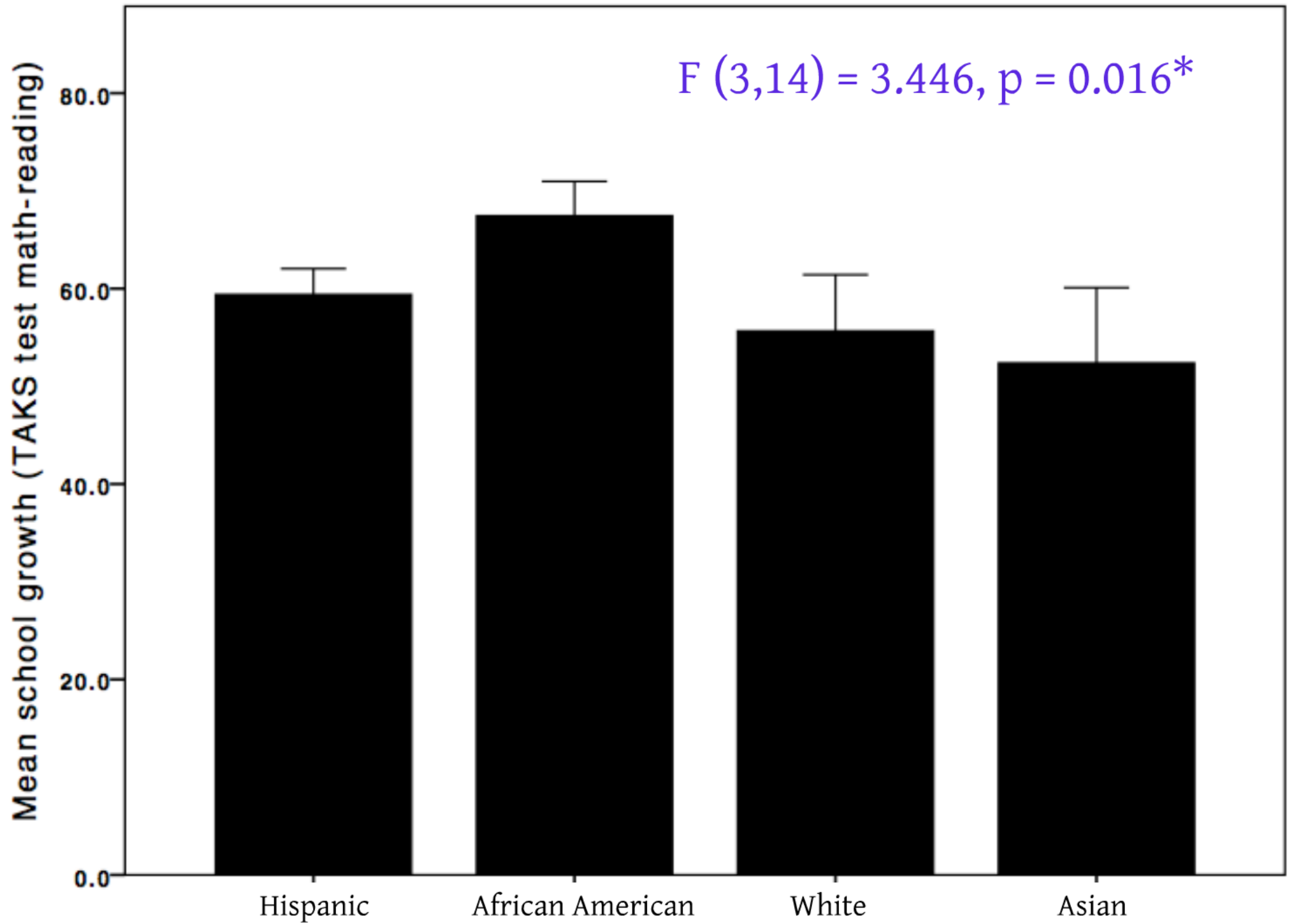
Recognized

Exemplary

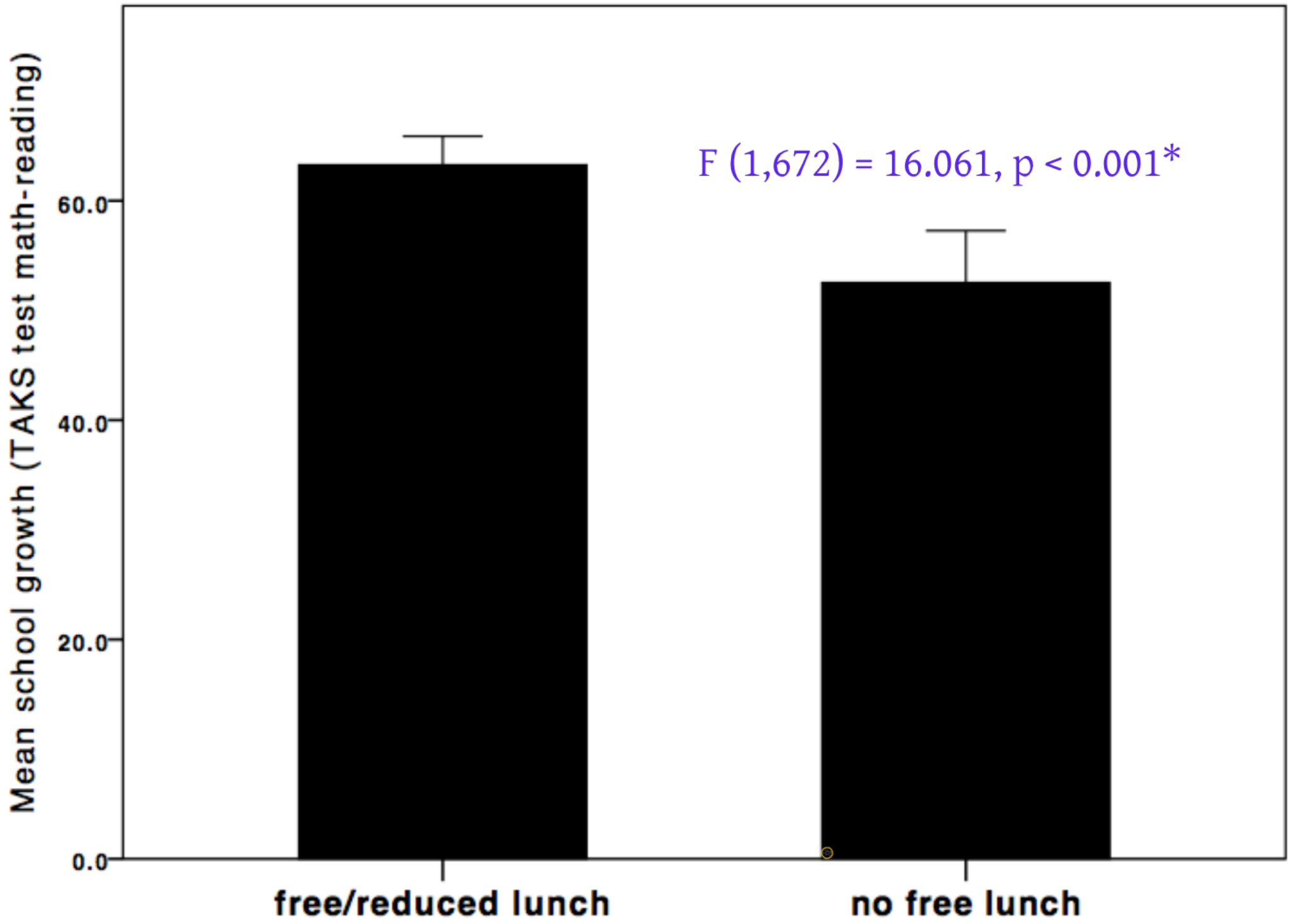


• Research Question 3:  
What is the difference among student ethnic groups in terms of TAKS tests scores growth for a cohort of students attending public elementary schools in Texas?

Mean sch



- Research Question 4:  
What is the difference among student socioeconomic status in terms of TAKS tests scores growth for a cohort of students attending public elementary schools in Texas?



- Research Question 5:  
What is the difference between students with and without language English proficiency in terms of TAKS tests scores growth for a cohort of students attending public elementary schools in Texas?



Mean school growth (TAKS test math-reading)

$F(1,648) = 30.076, p < 0.001^*$

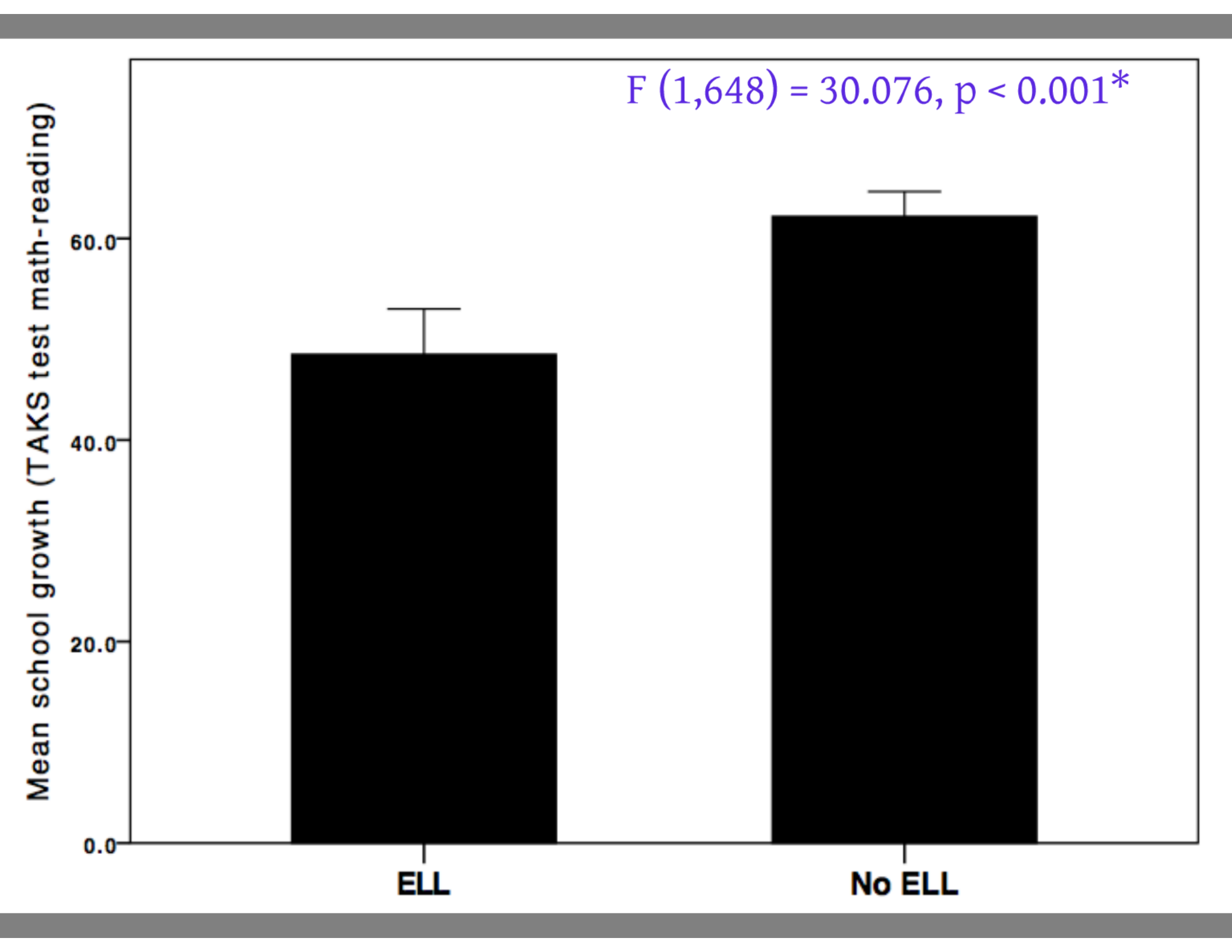
60.0  
40.0  
20.0  
0.0



ELL



No ELL



# Recommendations

- A status accountability system based on the percentage of students attaining the passing standards may mislead on qualifying the school academic effectiveness.
- It is necessary to advance toward a school accountability system that does not rely exclusively on high stakes assessments results.

# Current School Accountability System

*Academic growth  
is considered*

# Individual Student Progress

Individual Student  
Growth is not reported

Academic  
Progress

Test  
Scores

School  
community

Quality of  
Instruction

School  
performance

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