

NetSchools Forum Presentation  
to  
Berkeley Wireless Research  
Center

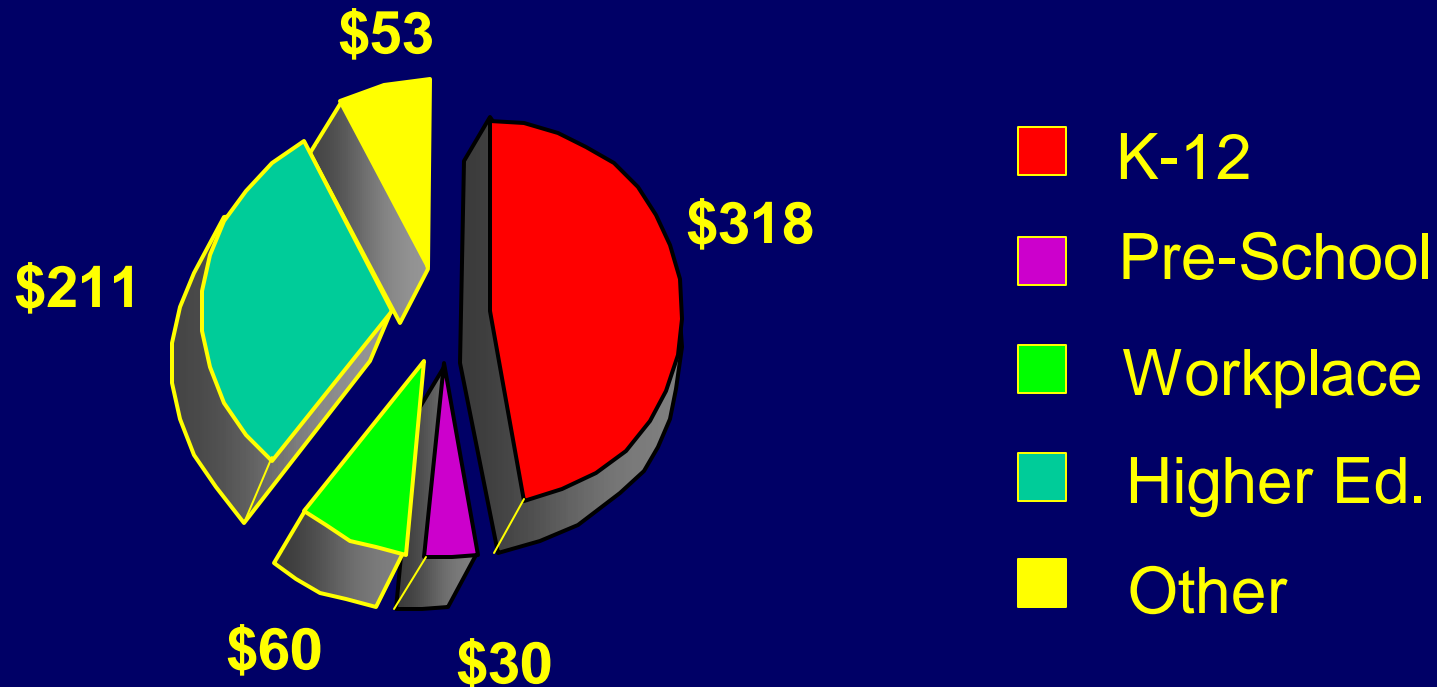
August 19, 1999

# Who is NetSchools?

- 30-month-old startup.
- Headquartered in Mountain View, CA.
- Market: K-12 schools.
- Focus: Systems approach to providing a computer for every student and teacher.

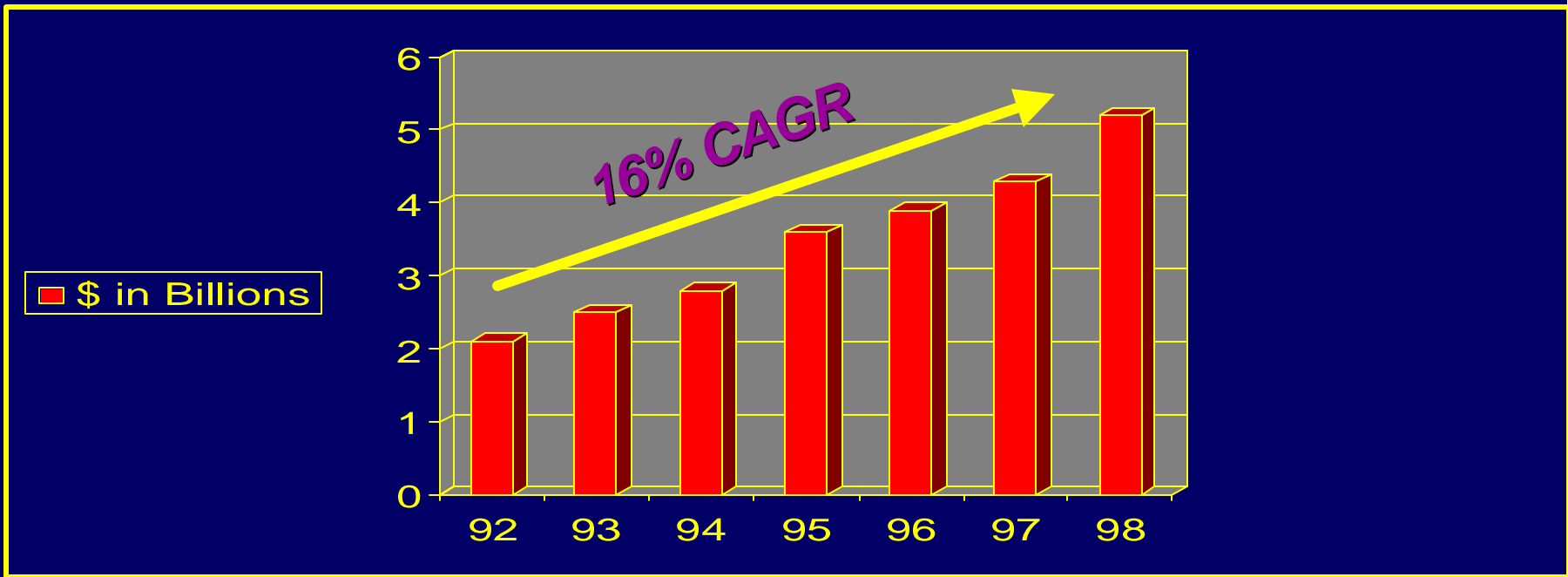
# The Market

1997 U.S. Expenditures on Education (Billions)



# The Market

## U.S. K-12 Technology Expenditures

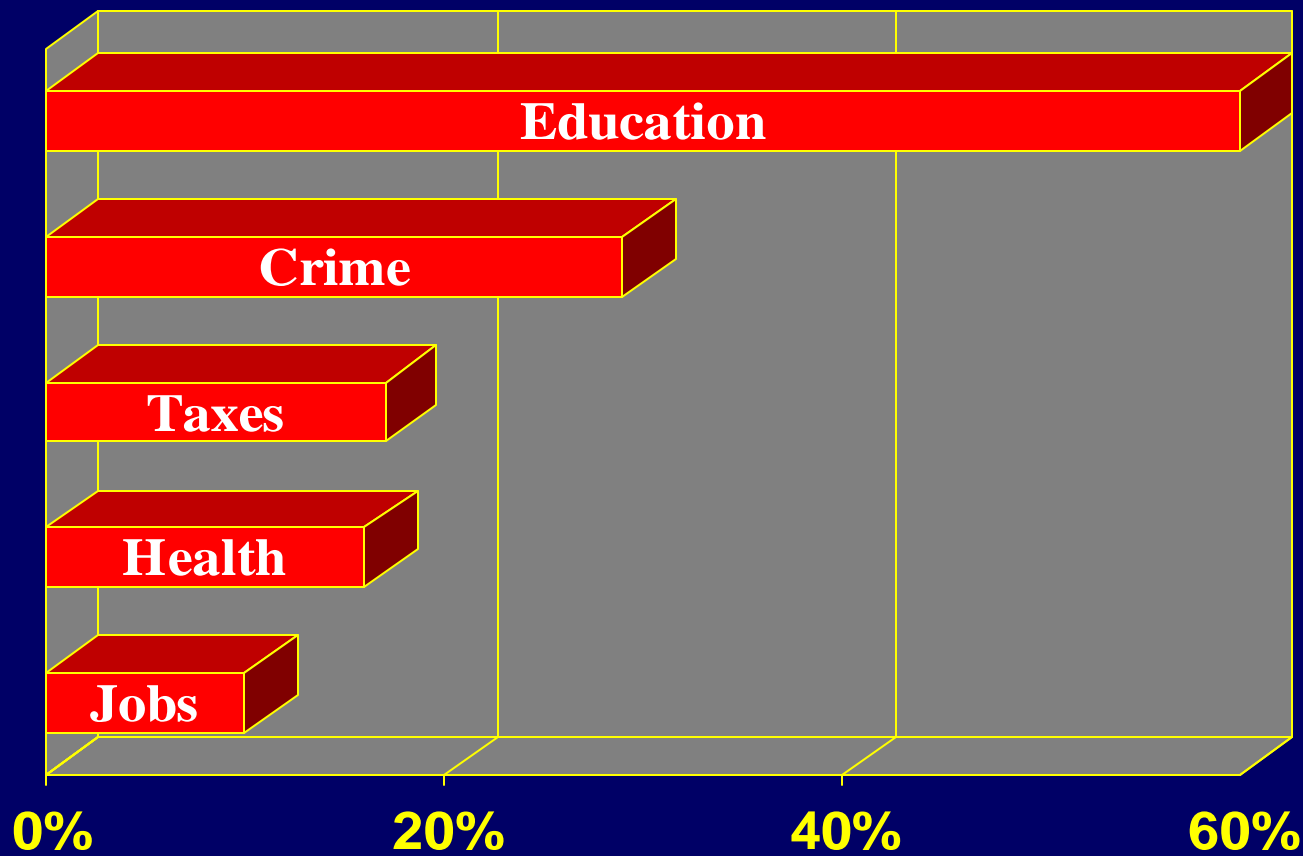


# The Market

## U.S. K-12 Market

- Large and growing:
  - 85,000 public schools in 14,800 districts
  - 26,000 private schools
  - 52 million students growing by 1 million per year\*
- Over \$318 billion estimated annual spending
  - Over \$5 billion on technology alone
  - E-rate adding \$2 billion subsidy

# Education - The Top Issue



# The Market

## Market Drivers

- Growing concern that “schools don’t work”
- Public demanding accountability
  - Strong education-economy connection
  - School funding a major political issue
- **TECHNOLOGY A KEY COMPONENT OF EVERY REFORM SOLUTION**

# Current Problem

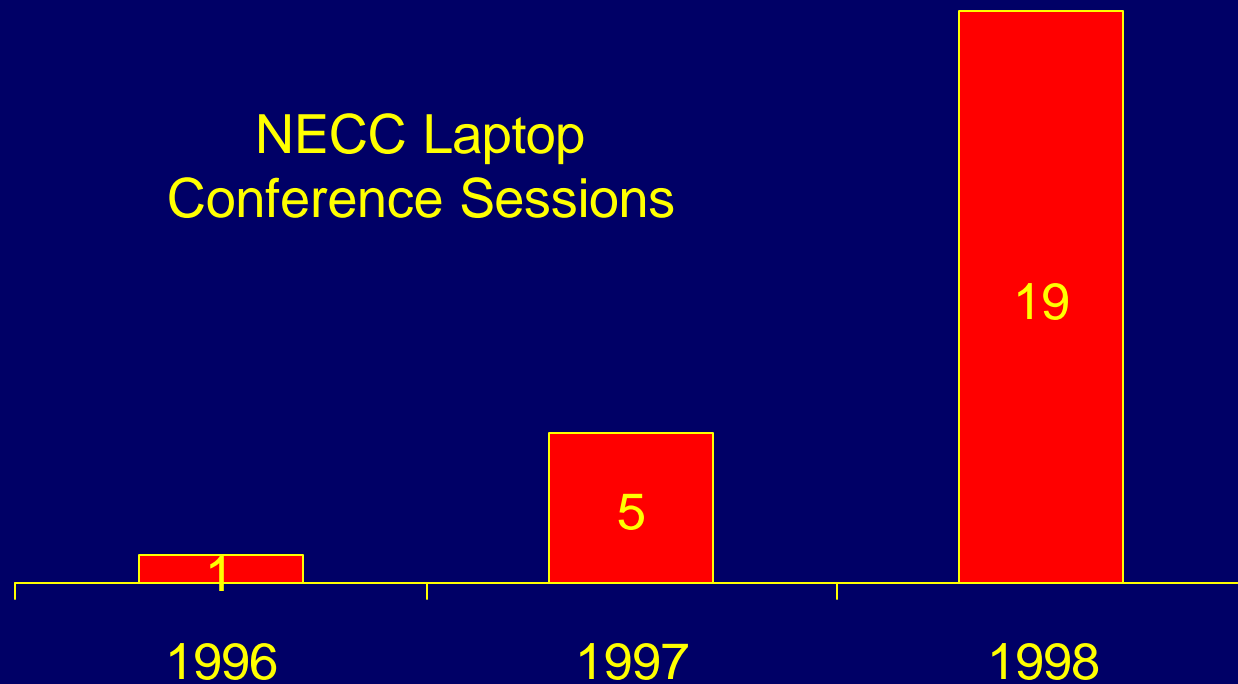
- 98% of schools have at least one computer
  - 3% of schools effectively integrating technology
  - Today: Student-to-computer ratio is 9:1
  - Tomorrow: Projected ratios
    - ≈ California - 4:1 by 2000
    - ≈ Texas - 1:1 by 2003 - 2007
- ≈ How do you get to a 1:1 ratio?

*One to One inevitable, but...*

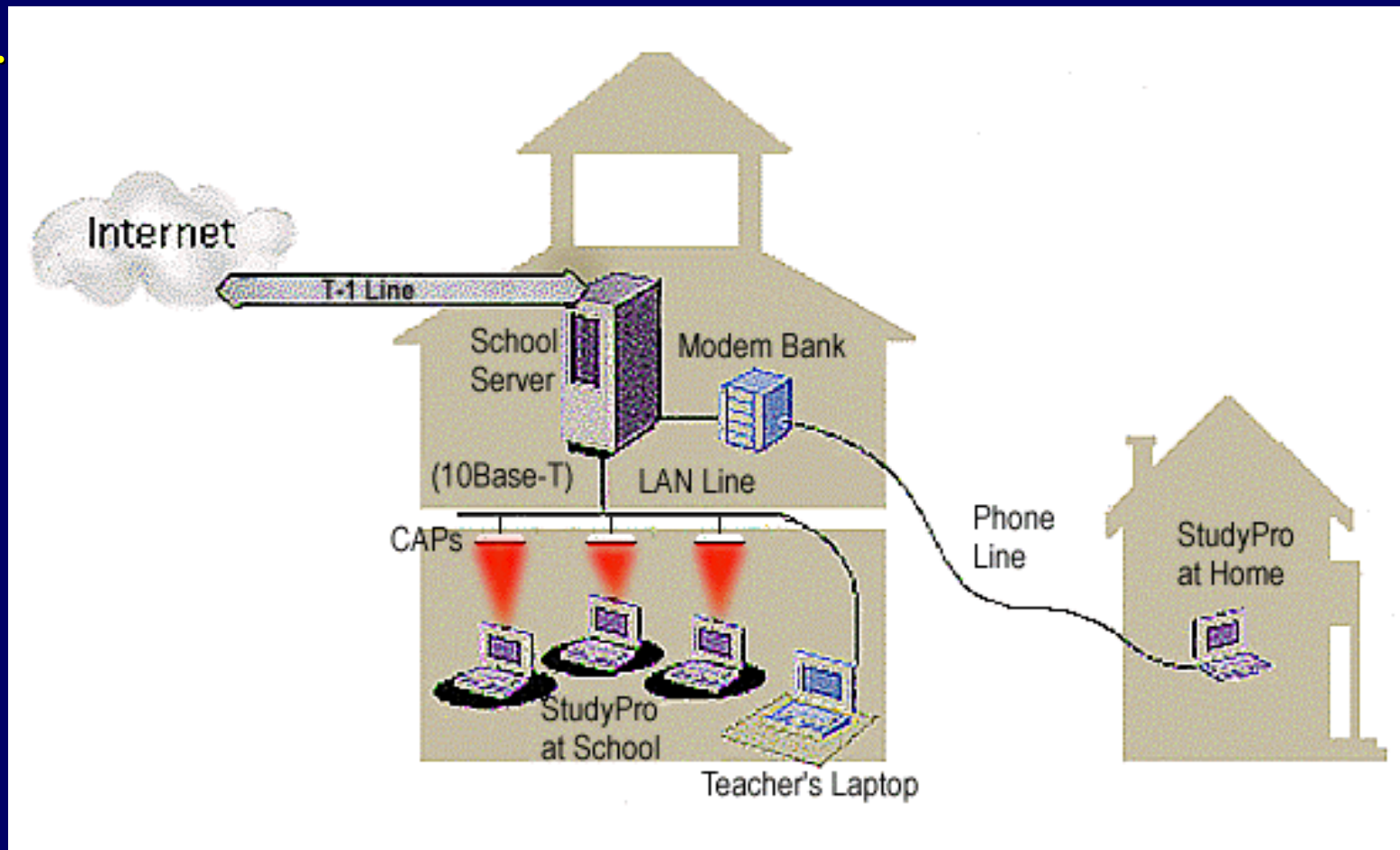
- Inadequate software
- Fragile notebook computers
- Existing approaches don't scale up
- Network cabling and power - *"It's the wiring, stupid"*

## Leading Indicators Show Strong Growth in 1:1 Computing Concept

NECC Laptop  
Conference Sessions



# NetSchools Solution



# Solution Components

- Rugged portable computers.
- High speed wireless LANs.
- Network-centric Academic Information System.
- Training, support and systems integration.

# The NetSchools Solution

## Proprietary Technologies

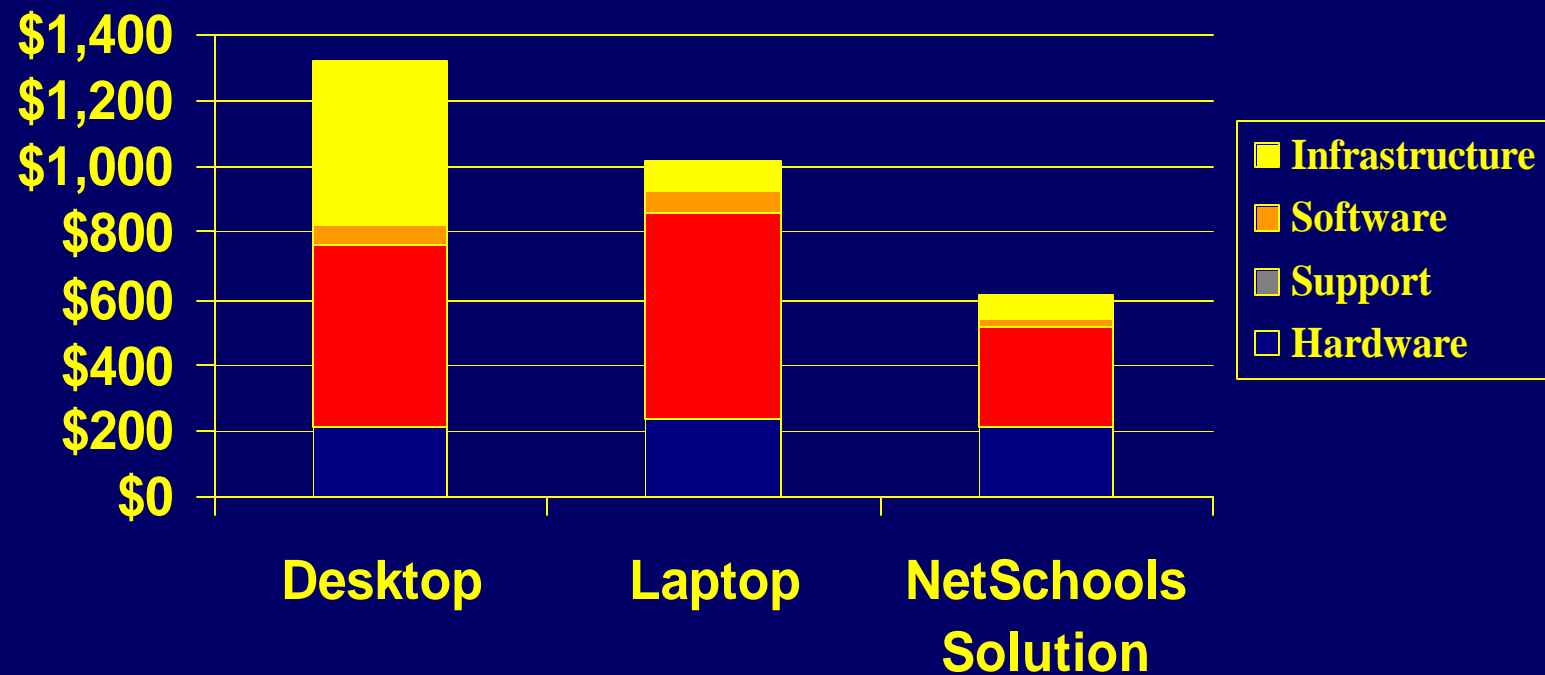
- Infrared LAN\*
- Anti-theft mechanism\*
- Auto print service roaming\*
- “Kid-proofing” features for laptop
- Microsoft Windows 95® in flash memory
- Hardened systems and application software
- AIS proprietary client/server software

# High speed wireless infrared LAN

- Significant advantages over RF LANS
  - Aggregate bandwidth: 1 Gigabit vs. 10 Megabit
  - Cost
  - Power efficiency: 10% longer run-time
  - Automatic student locator

# Low Cost of Ownership

*Annual cost per student*

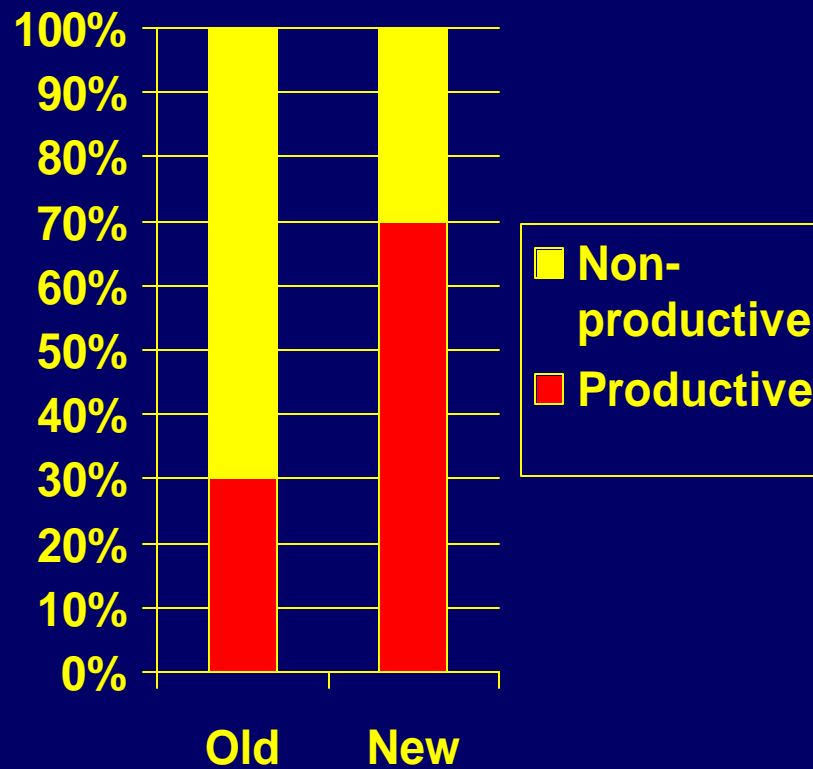


# The benefits of 1:1

- Equity
- Availability
- Access
- Collaboration
- Lengthening of the school day
- Individualization
- Motivation

# Theoretical Results

## Learning Productivity



Research  
Processing  
Production  
Collaboration  
Communicating  
Assessment

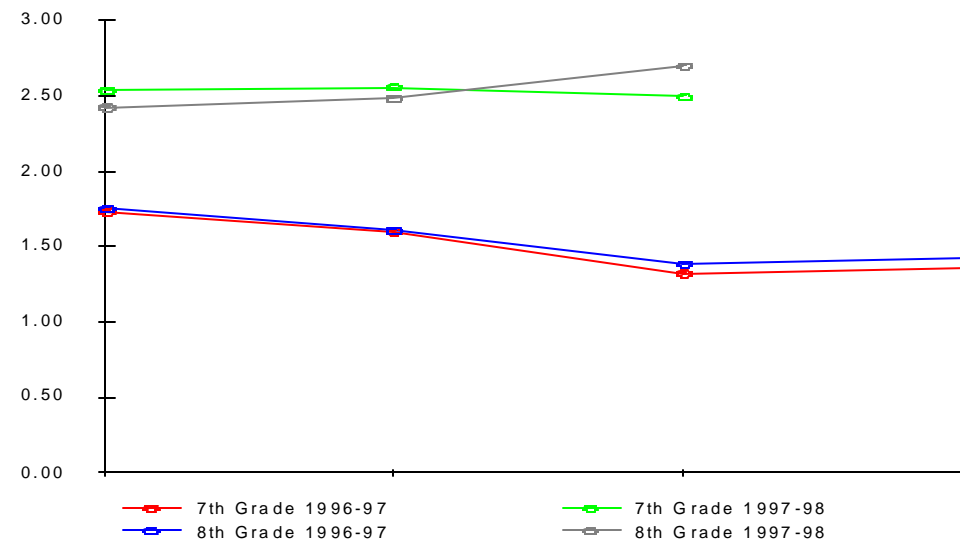
# Ysleta Experience





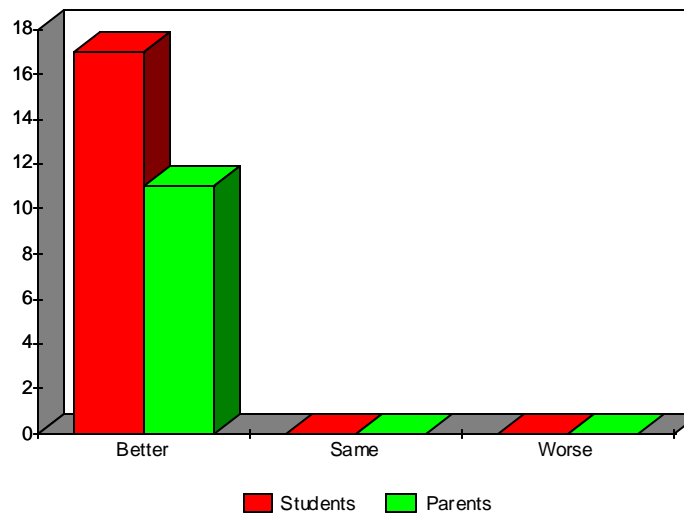
# Meridian Results

## GPA



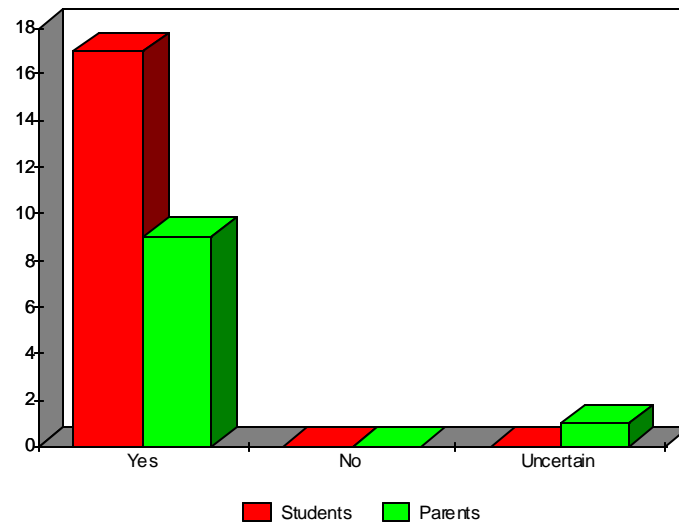
# Meridian Results

**“How would you compare your academic performance last year with this year?”**



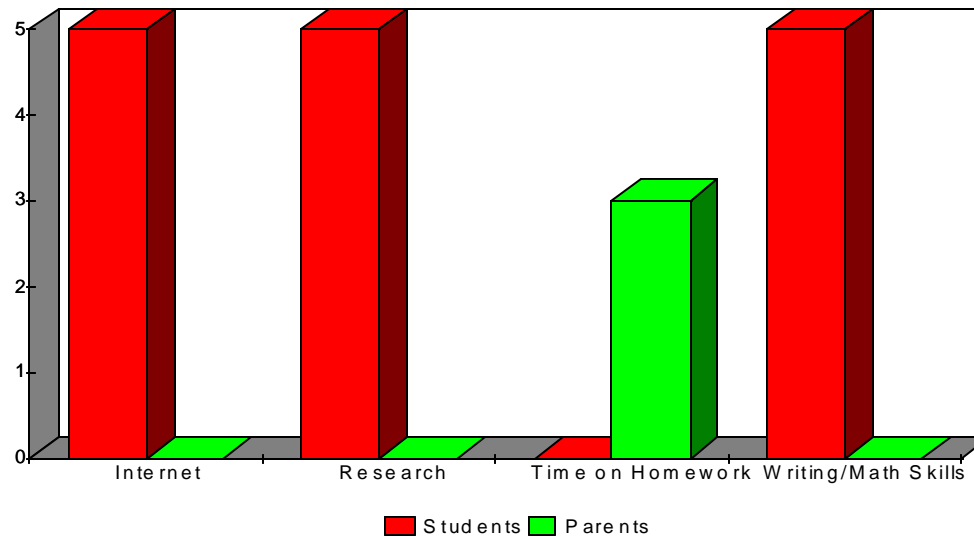
# Meridian Results

**“Have the computers been an influence?”**



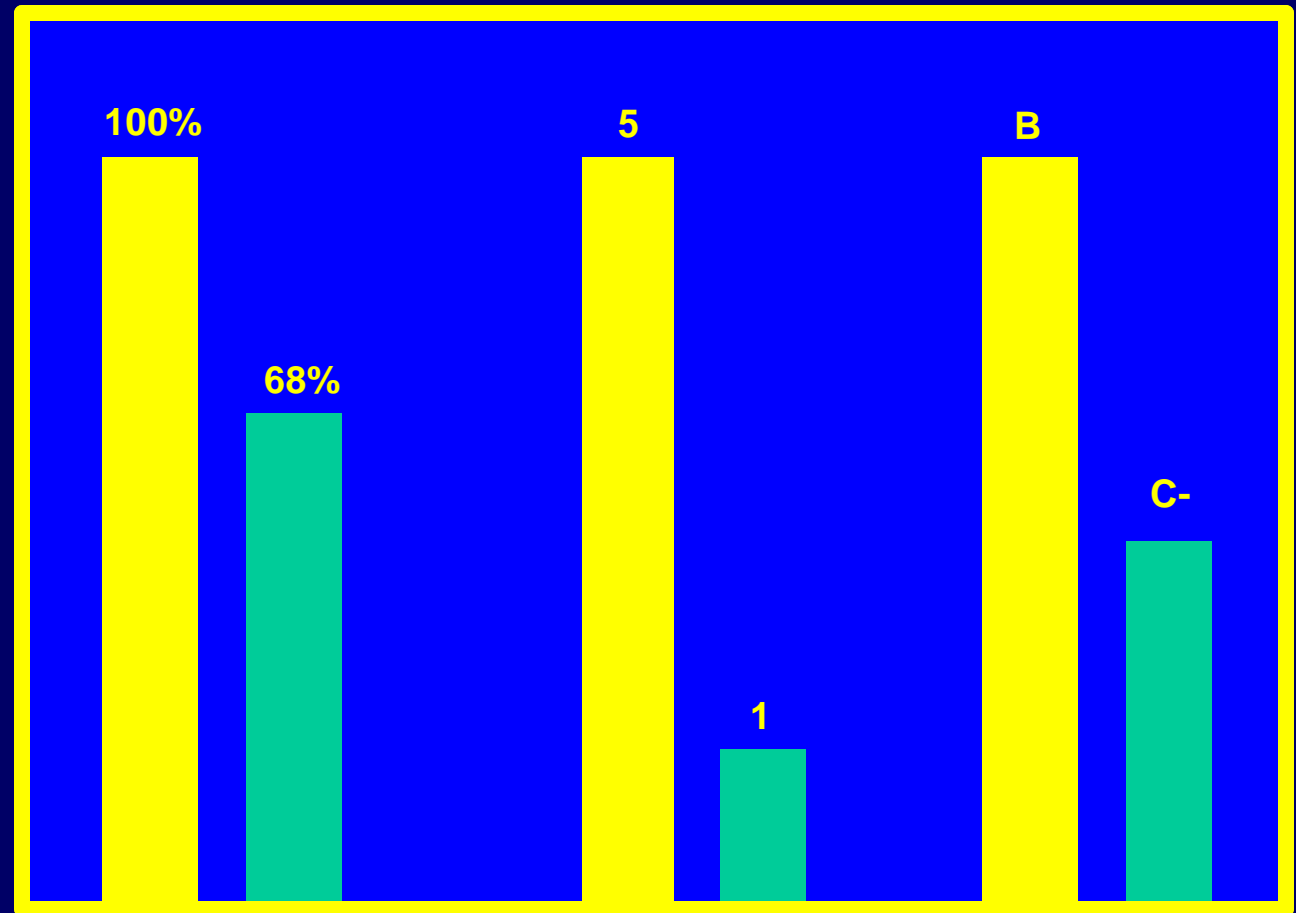
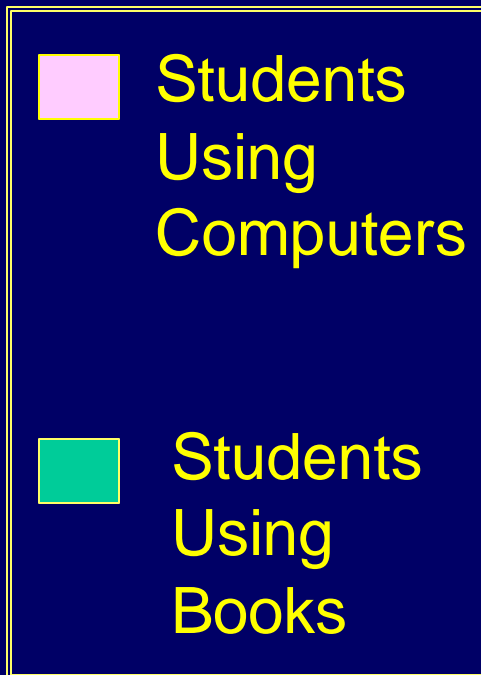
# Meridian Results

“In what ways?”



# Case Study - Redondo Beach

## Homework Assignment Comparison Books vs. Computers\*



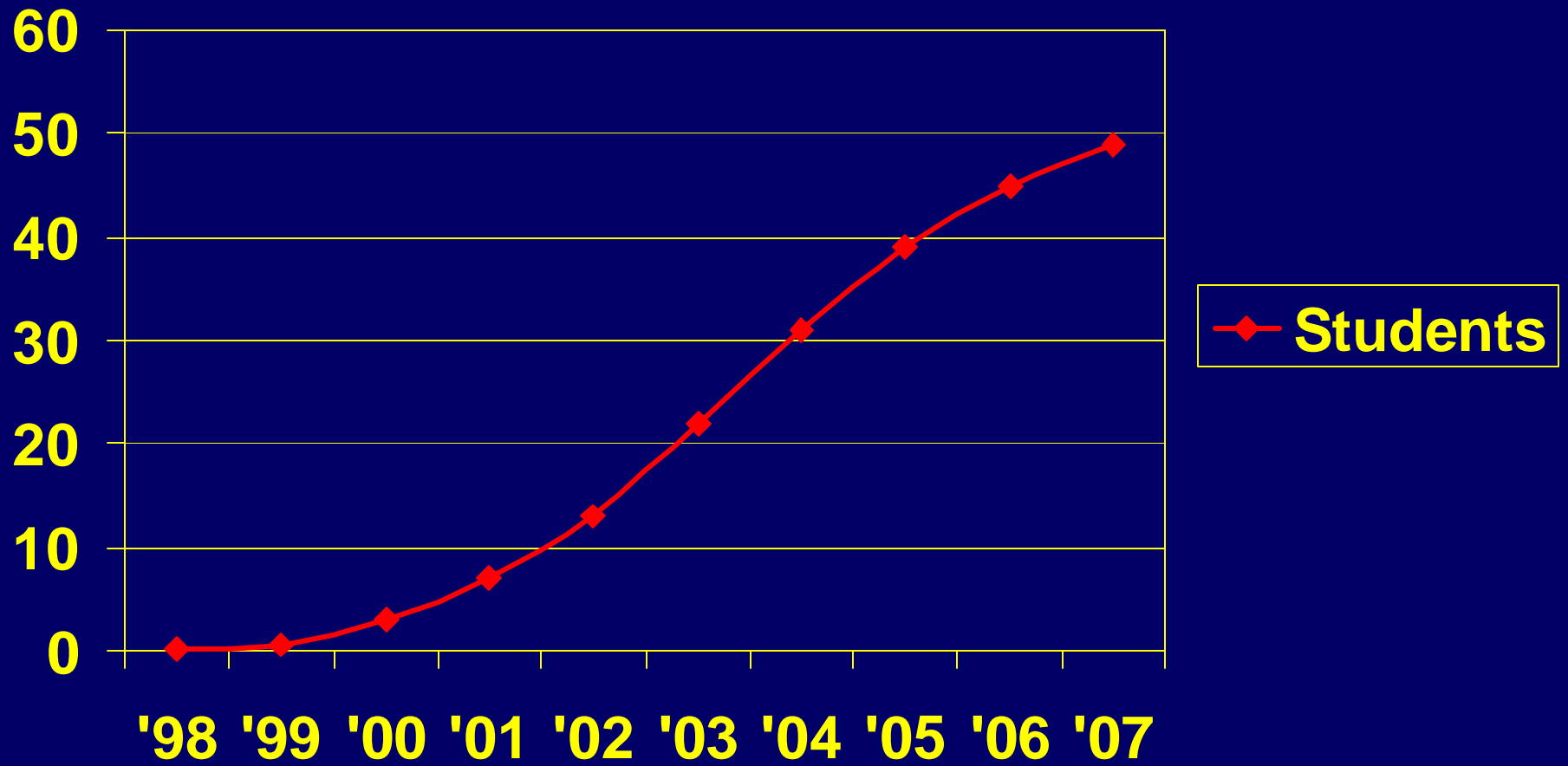
\*Source  
Jan '97 Redondo Union  
High School—Cyber Study

Percentage of Assignments Completed

Average Number of Sources Cited

Average Grade Received

# 1:1 Adoption Rate



# Summary

- **There is no more pressing issue than education.**
- **The 1:1 paradigm is rapidly gaining acceptance.**
- **It has the potential to dramatically increase learning productivity.**
- **Every Student. Everywhere. This will change the face of education, business, and society.**

“Someday 52 Million Students  
will each have a computer”

The impact on education and the  
wireless world will be  
enormous...

**What about you?**

**Are You READY?**