

Millennial Laptop Research Project

FINAL REPORT

Year 1 Findings

- Strong program based on careful planning
- Support from RUSD leadership
- Lack of technology training for teachers
- Need for differentiated trainings
- Minimal hardware/software planning
- Frustrated by tech problems/support
- Need for parent education at Del Mar
- Focus on overview of District Technology goals

Actions based on Findings

- Centralized Tech Support
- Refreshed Student Laptops & Laptop Bags
- Complete Assessment & Servicing of existing G4 iBooks
- Imaging Process and Storage Changed
- New Laptop Handbook & Student/Parent Orientation
- Technology Leadership 2.0 Training
- SmartBoard's Installed
- New Printers and existing relocated based on needs
- Online Resources for Students and Staff
- Parent Workshops Offered @ Del Mar

Impact of Teaching with Technology

Del Mar

- Increase in ability to individualize instruction
- More effective teaching
- Make content more relevant
- Assign project-based work
- Use authentic assessment when possible
- Develop critical thinking skills
- Explore topics in greater depth
- Teachers have skills to teach 21st C

Impact on Learning: Statistical Increases at Del Mar

| Academic use of laptop | Fall '07 | Spring '09 |
|--|----------|------------|
| Students are more interested in doing schoolwork | 2.87 | 3.24 |
| Support individualized learning | 3.22 | 4.29 |
| Work collaboratively with others | 3.30 | 4.17 |
| Research using online resources | 3.20 | 4.17 |
| Compensate for learning challenges | 2.83 | 4.05 |
| Use interactive instructional material | 2.63 | 3.95 |
| Design and give multimedia presentations | 3.00 | 3.78 |
| Use of digital peripherals | 2.54 | 3.73 |
| Submit homework | 2.78 | 3.68 |
| Use of visualizations or simulations | 2.58 | 3.59 |
| Drill and practice | 2.29 | 3.23 |
| Take quizzes and tests | 2.38 | 3.14 |

Impact of Teaching with Technology

Bel Aire

100% of respondents agreed that:

- Teaching has benefited from using laptop
- Explore topics in greater depth
- Use authentic assessment

80% to 90% agreed that they were able to:

- Develop critical thinking skills
- Assign project-based work
- Make content more relevant to student's lives
- Individualize instruction
- Teach more effectively
- Facilitate rather than direct

Impact on Learning

Bel Aire

- Quality of student education has improved
- Greater access for in-depth research
- Students are more productive and engaged
- Overall quality of work is better
- More involved and interested in class
- Quality of writing is better
- Able to work independently and help others
- More interested in doing schoolwork

Impact on Student Learning

- I like using the laptop to write and am more likely to revise/edit my work on a laptop.
- The quality of my work is improving because of my laptop.
- Having a laptop helps me to be better organized.
- The quality of my schoolwork is improving since we received our laptops.
- The laptop helps me, and groups I am in, to work on school projects more independently.

Student Attitudes and Use of Laptops Del Mar and BelAire Teachers

- Increase in student interest in schoolwork
- Help each other more
- Treat laptops respectfully
- Rarely waste time
- Rarely share inappropriate material
- Rarely surf the Internet rather than work
- Are not very distracted

Teacher Challenges

- Preparation time (DM and BA)
- Printing issues (DM and BA)

Statistical changes from Year 1:

- Tech support decreased as a problem (DM)
- Decrease in tech problems that hinder learning (BA)
- Class periods not too short to use laptops effectively (DM)

Del Mar Parents - Benefits of Laptops

- 90% believe there is educational value in technology.
- Specific benefits included: research opportunities, tech knowledge and skills for future, as an organizational tool, for writing and editing, to develop 21st Century skills, to complete projects and create presentations, for communication, to instill independence and responsibility.

Del Mar Parent Concerns

- Use of laptop for fun
- Difficulty monitoring laptop use at home
- Accessing teacher websites and using the information provided
- Exposure to inappropriate material online
- Usefulness in academics
- Laptop weight
- Time management

RUSD Graduates

Based on Del Mar preparation:

- Overall computer skills continue to improve
- Able to successfully integrate tech into schoolwork
- Do more research on the Internet
- Writing continues to improve
- More likely to revise their work
- Were better prepared or as prepared as others

Graduates

- Use computers for research and written work

However, use computers less in high school:

- To make digital videos
- For tests and quizzes
- To integrate music
- As organizational tool (calendar)
- To make audio files
- To take notes
- To work with graphics

Summary

- Strong leadership focused on technology as a tool to support teaching and learning not for sake of tech alone.
- 21st C learning? Teachers have positive attitude and skills. 90% are using technology to individualize instruction and make content more relevant.
- Important for technology to remain a priority.