Chapter One: Why Use Technology in the Language Arts Classroom?

 Education Reform and Standards

Preparing teachers for the 21st Century has been a concern of both political and educational leaders in this country during the last two decades. In the fifth State of the Union address on February 4, 1997, President Clinton challenged America to make teaching a national priority. In response to the president's address, the U.S. Department of Education developed priorities that focused on strategies to improve education. These strategies called for a talented, dedicated, and well-prepared teacher in every classroom, clearly stated standards of achievement and accountability for all children, technological literacy for every young person entering the workforce in the 21st Century, and a safe, disciplined school environment (U.S. Department of Education, 1997).

Public education reform was triggered a decade earlier by a report, A Nation at Risk, which claimed that U.S. students generally achieved at lower skill levels than those of other industrialized nations (National Commission on Excellence in Education, 1983). The Goals 2000: Educate America Act enacted by Congress in 1994 (United States of America 103rd Congress), provided the framework for education reform for the 21st Century. This legislation called for the establishment of high-quality, internationally competitive content and performance standards for all students, promoted the use of technology to enable all students to achieve national goals, and emphasized the need for teacher education and professional development. Teachers were to be given the opportunity to acquire the knowledge and skills needed to instruct and prepare students for the next century. They were to have access to programs to improve professional skills and encouraged "to use emerging new methods, forms of assessment, and technologies" (The National Education Goals Panel, 1998, Goal 4, p. 1).

Three themes of significance converged in recent education reform documents concerning the preparation of teachers for the 21st Century: teacher accountability to professional content and certification standards, performance-based authentic assessment for both teachers and students, and the need for educators to have technological expertise. The U.S. Department of Education's New Teacher's Guide stated: "The highest academic standards, the best facilities, the strongest accountability measures, and the latest technology will do little good if we do not have a teaching force of the highest quality" (1997b, p. 1). Providing well-prepared, technologically literate teachers who meet high professional standards has presented a challenge to pre-service teacher training institutions. (Piper, C. 1999. Electronic Portfolios in Teacher Education)

California Subject Matter Content Standards

Locate the English/Language Arts content standards for your grade level. You may wish to save the file on your computer by right clicking or holding the button down on MAC and selecting "save target as" or "save link as" to save these standards on your own computer. Some will be Adobe Reader pdf files and others will be web html files. Note the emphasis on media literacy, research and technology, writing and publishing using computer word processing, and oral presentations using multimedia.

- California Department of Education Website - http://www.cde.ca.gov/index.asp
- California Curriculum and Instruction Standards and Frameworks - http://www.cde.ca.gov/ci/
- Reading and Language Arts Standards for California - http://www.cde.ca.gov/re/pn/fd/documents/english-language-arts.pdf
- California Reading and Language Arts Frameworks - http://www.cde.ca.gov/be/st/fr/
- California Content Standards - S.C.O.R.E - http://www.score.k12.ca.us
- Click on the standards link for a searchable standards site at - http://www.history.ctaponline.org/center/index.cfm?main=tools/standards.cfm-and-subj=2
- California Learning Resource Network (CLRN) - http://www.clrn.org/home/

California Reading and Language Arts Standards with Technology Focus

Look for references to tasks and skills for your own grade level area. In particular, grades 7-12 will focus on using software such as word processing (Word) and presentation (Powerpoint) applications for expository and creative writing, publication, and oral presentation. A major focus is on Research and Technology and media literacy.

Primary Grades - K-2

Technology can be used in primary grades to help teach concepts of print, elements of a story - plot, characters, settings, etc. Writing stories, typing journals, creating desktop publishing products, and using appropriate reading and publishing software can reinforce the basic skills for reading and writing. In grade two, students are asked to "Report on a topic with facts and details, drawing from several sources of information."

Key Areas for Grades 3-4

- Write personal and formal letters, thank-you notes, and invitations
- Clarify and enhance oral presentations through the use of appropriate props (e.g., objects, pictures, charts).
- Compare ideas and points of view expressed in broadcast and print media.
- Make brief narrative presentations: Provide a context for an incident that is the subject of the presentation.
- Plan and present dramatic interpretations of experiences, stories, poems, or plays with clear diction, pitch, tempo, and tone.
- Make descriptive presentations that use concrete sensory details to set forth and support unified impressions of people, places, things, or experiences.
- Follow multiple-step instructions in a basic technical manual (e.g., how to use computer commands or video games).
- Write information reports:
    - Frame a central question about an issue or situation.
    - Include facts and details for focus.
    - Draw from more than one source of information (e.g., speakers, books, newspapers, other media sources).

Research and Technology

- Quote or paraphrase information sources, citing them appropriately.
- Locate information in reference texts by using organizational features (e.g., prefaces, appendixes).
- Use various reference materials (e.g., dictionary, thesaurus, card catalog, encyclopedia, online information) as an aid to writing.
- Understand the organization of almanacs, newspapers, and periodicals and how to use those print materials.
- Demonstrate basic keyboarding skills and familiarity with computer terminology (e.g., cursor, software, memory, disk drive, hard drive).

Evaluation and Revision

- Edit and revise selected drafts to improve coherence and progression by adding, deleting, consolidating, and rearranging text.

Analysis and Evaluation of Oral Media Communication

- Evaluate the role of the media in focusing attention on events and in forming opinions on issues.
- Make narrative presentations
    - Relate ideas, observations, or recollections about an event or experience.
    - Provide a context that enables the listener to imagine the circumstances of the event or experience.
    - Provide insight into why the selected event or experience is memorable.

- Make informational presentations:
    - Frame a key question.
    - Include facts and details that help listeners to focus.
    - Incorporate more than one source of information (e.g., speakers, books, newspapers, television or radio reports).

Key Areas for Grades 5-6

- Understand how text features (e.g., format, graphics, sequence, diagrams, illustrations, charts, maps) make information accessible and usable.
- Identify, analyze, and critique persuasive techniques (e.g., promises, dares, flattery, glittering generalities)
- Identify logical fallacies used in oral presentations and media messages.
- Analyze media as sources for information, entertainment, persuasion, interpretation of events, and transmission of culture.
- Identify the structural features of popular media (e.g., newspapers, magazines, online information) and use the features to obtain information.
- Write research reports about important ideas, issues, or events by using the following guidelines: (Grade 5)
    - Frame questions that direct the investigation.
    - Establish a controlling idea or topic.
    - Develop the topic with simple facts, details, examples, and explanations.
- Write research reports: (Grade 6)
    - Pose relevant questions with a scope narrow enough to be thoroughly covered.
    - Support the main idea or ideas with facts, details, examples, and explanations from multiple authoritative sources (e.g., speakers, periodicals, online information searches).
    - Include a bibliography.
- Write persuasive letters or compositions:
    - State a clear position in support of a proposal.
    - Support a position with relevant evidence.
    - Follow a simple organizational pattern.
    - Address reader concerns.
- Determine the adequacy and appropriateness of the evidence for an author's conclusions.
- Make reasonable assertions about a text through accurate, supporting citations.
- Note instances of unsupported inferences, fallacious reasoning, persuasion, and propaganda in text.
- Support opinions with detailed evidence and with visual or media displays that use appropriate technology.
- Analysis and Evaluation of Oral and Media Communications
    - Analyze the use of rhetorical devices (e.g., cadence, repetitive patterns, use of onomatopoeia) for intent and effect.
    - Identify persuasive and propaganda techniques used in television and identify false and misleading information.

- Deliver informative presentations:
    - Pose relevant questions sufficiently limited in scope to be completely and thoroughly answered.
    - Develop the topic with facts, details, examples, and explanations from multiple authoritative sources (e.g., speakers, periodicals, online information).

Research and Technology

- Use organizational features of printed text (e.g., citations, end notes, bibliographic references) to locate relevant information.
- Create simple documents by using electronic media and employing organizational features (e.g., passwords, entry and pull-down menus, word searches, the thesaurus, spell checks).
- Use a thesaurus to identify alternative word choices and meanings.
- Use organizational features of electronic text (e.g., bulletin boards, databases, keyword searches, e-mail addresses) to locate information.
- Compose documents with appropriate formatting by using word-processing skills and principles of design (e.g., margins, tabs, spacing, columns, page orientation).
- Edit and revise manuscripts to improve the meaning and focus of writing by adding, deleting, consolidating, clarifying, and rearranging words and sentences.
- Revise writing to improve the organization and consistency of ideas within and between paragraphs.

Key Areas for Grades 7-8

Research and Technology

- Identify topics; ask and evaluate questions; and develop ideas leading to inquiry, investigation, and research.
- Give credit for both quoted and paraphrased information in a bibliography by using a consistent and sanctioned format and methodology for citations.
- Create documents by using word-processing skills and publishing programs; develop simple databases and spreadsheets to manage information and prepare reports.
- Revise writing to improve organization and word choice after checking the logic of the ideas and the precision of the vocabulary
- Plan and conduct multiple-step information searches by using computer networks and modems.
- Achieve an effective balance between researched information and original ideas.
- Revise writing for word choice; appropriate organization; consistent point of view; and transitions between paragraphs, passages, and idea

Writing

- Write research reports:
    - Define a thesis.
    - Record important ideas, concepts, and direct quotations from significant information sources and paraphrase and summarize all perspectives on the topic, as appropriate.
    - Use a variety of primary and secondary sources and distinguish the nature and value of each.
    - Organize and display information on charts, maps, and graphs.
- Write persuasive compositions:
    - Include a well-defined thesis (i.e., one that makes a clear and knowledgeable judgment)
    - Present detailed evidence, examples, and reasoning to support arguments, differentiating between facts and opinion.
    - Provide details, reasons, and examples, arranging them effectively by anticipating and answering reader concerns and counterarguments.
- Write documents related to career development, including simple business letters and job applications:
    - Present information purposefully and succinctly and meet the needs of the intended audience.
    - Follow the conventional format for the type of document (e.g., letter of inquiry, memorandum).
- Write technical documents:
    - Identify the sequence of activities needed to design a system, operate a tool, or explain the bylaws of an organization.
    - Include all the factors and variables that need to be considered.
    - Use formatting techniques (e.g., headings, differing fonts) to aid comprehension.

Analysis and Evaluation of Oral and Media Communications

- Evaluate the credibility of a speaker (e.g., hidden agendas, slanted or biased material).
- Interpret and evaluate the various ways in which visual image makers (e.g., graphic artists, illustrators, news photographers) communicate information and affect impressions and opinions.

Oral Communication

- Deliver research presentations:
    - Define a thesis.
    - Record important ideas, concepts, and direct quotations from significant information sources and paraphrase and summarize all relevant perspectives on the topic, as appropriate.

o Use a variety of primary and secondary sources and distinguish the nature and value of each.
o Organize and record information on charts, maps, and graphs.

Example of Technology Focus for Grades 9-12

Reading Comprehension (Focus on Informational Materials)

Students read and understand grade-level-appropriate material. They analyze the organizational patterns, arguments, and positions advanced. The selections in *Recommended Literature, Grades Nine Through Twelve* (1990) illustrate the quality and complexity of the materials to be read by students. In addition, by grade twelve, students read two million words annually on their own, including a wide variety of classic and contemporary literature, magazines, newspapers, and online information. In grades nine and ten, students make substantial progress toward this goal.

Structural Features of Informational Materials

- Analyze the structure and format of functional workplace documents, including the graphics and headers, and explain how authors use the features to achieve their purposes.
- Prepare a bibliography of reference materials for a report using a variety of consumer, workplace, and public documents.

Comprehension and Analysis of Grade-Level-Appropriate Text

- Generate relevant questions about readings on issues that can be researched.
- Synthesize the content from several sources or works by a single author dealing with a single issue; paraphrase the ideas and connect them to other sources and related topics to demonstrate comprehension.
- Extend ideas presented in primary or secondary sources through original analysis, evaluation, and elaboration.
- Demonstrate use of sophisticated learning tools by following technical directions (e.g., those found with graphic calculators and specialized software programs and in access guides to World Wide Web sites on the Internet).

Expository Critique

- Critique the logic of functional documents by examining the sequence of information and procedures in anticipation of possible reader misunderstandings.
- Evaluate the credibility of an author's argument or defense of a claim by critiquing the relationship between generalizations and evidence, the comprehensiveness of evidence, and the way in which the author's intent affects

the structure and tone of the text (e.g., in professional journals, editorials, political speeches, primary source material).

Writing Strategies

Research and Technology

- Use clear research questions and suitable research methods (e.g., library, electronic media, personal interview) to elicit and present evidence from primary and secondary sources.
- Develop the main ideas within the body of the composition through supporting evidence (e.g., scenarios, commonly held beliefs, hypotheses, definitions).
- Synthesize information from multiple sources and identify complexities and discrepancies in the information and the different perspectives found in each medium (e.g., almanacs, microfiche, news sources, in-depth field studies, speeches, journals, technical documents).
- Integrate quotations and citations into a written text while maintaining the flow of ideas.
- Use appropriate conventions for documentation in the text, notes, and bibliographies by adhering to those in style manuals (e.g., *Modern Language Association Handbook, The Chicago Manual of Style).*
- Design and publish documents by using advanced publishing software and graphic programs.

Write expository compositions, including analytical essays and research reports:

- Marshal evidence in support of a thesis and related claims, including information on all relevant perspectives.
- Convey information and ideas from primary and secondary sources accurately and coherently.
- Make distinctions between the relative value and significance of specific data, facts, and ideas.
- Include visual aids by employing appropriate technology to organize and record information on charts, maps, and graphs.
- Anticipate and address readers' potential misunderstandings, biases, and expectations.
- Use technical terms and notations accurately.

Write business letters:

- Provide clear and purposeful information and address the intended audience appropriately.
- Use appropriate vocabulary, tone, and style to take into account the nature of the relationship with, and the knowledge and interests of, the recipients.
- Highlight central ideas or images.

- Follow a conventional style with page formats, fonts, and spacing that contribute to the documents' readability and impact.

Manuscript Form

- Produce legible work that shows accurate spelling and correct use of the conventions of punctuation and capitalization.
- Reflect appropriate manuscript requirements, including title page presentation, pagination, spacing and margins, and integration of source and support material (e.g., in-text citation, use of direct quotations, paraphrasing) with appropriate citations.

Listening and Speaking

Students formulate adroit judgments about oral communication. They deliver focused and coherent presentations of their own that convey clear and distinct perspectives and solid reasoning. They use gestures, tone, and vocabulary tailored to the audience and purpose.

Comprehension

- Formulate judgments about the ideas under discussion and support those judgments with convincing evidence.
- Compare and contrast the ways in which media genres (e.g., televised news, news magazines, documentaries, online information) cover the same event.

Organization and Delivery of Oral Communication

- Choose logical patterns of organization (e.g., chronological, topical, cause and effect) to inform and to persuade, by soliciting agreement or action, or to unite audiences behind a common belief or cause.
- Choose appropriate techniques for developing the introduction and conclusion (e.g., by using literary quotations, anecdotes, references to authoritative sources).
- Recognize and use elements of classical speech forms (e.g., introduction, first and second transitions, body, conclusion) in formulating rational arguments and applying the art of persuasion and debate.
- Present and advance a clear thesis statement and choose appropriate types of proof (e.g., statistics, testimony, specific instances) that meet standard tests for evidence, including credibility, validity, and relevance.
- Use props, visual aids, graphs, and electronic media to enhance the appeal and accuracy of presentations.
- Produce concise notes for extemporaneous delivery.
- Analyze the occasion and the interests of the audience and choose effective verbal and nonverbal techniques (e.g., voice, gestures, eye contact) for presentations.

Analysis and Evaluation of Oral and Media Communications

- Analyze historically significant speeches (e.g., Abraham Lincoln's "Gettysburg Address," Martin Luther King, Jr.'s "I Have a Dream") to find the rhetorical devices and features that make them memorable.
- Assess how language and delivery affect the mood and tone of the oral communication and make an impact on the audience.
- Evaluate the clarity, quality, effectiveness, and general coherence of a speaker's important points, arguments, evidence, organization of ideas, delivery, diction, and syntax.
- Analyze the types of arguments used by the speaker, including argument by causation, analogy, authority, emotion, and logic.
- Identify the aesthetic effects of a media presentation and evaluate the techniques used to create them (e.g., compare Shakespeare's *Henry V* with Kenneth Branagh's 1990 film version).

National Language Arts Standards

http://www.educationworld.com/standards/national/toc/index.shtml#lang

The national standards in Language Arts emphasize the ability to communicate through various media for a variety of purposes. A major focus for English and Language Arts programs involves evaluating and using electronic and online media for research.

READING FOR PERSPECTIVE

Students read a wide range of print and nonprint texts to build an understanding of texts, of themselves, and of the cultures of the United States and the world; to acquire new information; to respond to the needs and demands of society and the workplace; and for personal fulfillment. Among these texts are fiction and nonfiction, classic and contemporary works.

UNDERSTANDING THE HUMAN EXPERIENCE

Students read a wide range of literature from many periods in many genres to build an understanding of the many dimensions (e.g., philosophical, ethical, aesthetic) of human experience.

EVALUATION STRATEGIES

Students apply a wide range of strategies to comprehend, interpret, evaluate, and appreciate texts. They draw on their prior experience, their interactions with other readers and writers, their knowledge of word meaning and of other texts, their word identification

strategies, and their understanding of textual features (e.g., sound-letter correspondence, sentence structure, context, graphics).

COMMUNICATION SKILLS

Students adjust their use of spoken, written, and visual language (e.g., conventions, style, vocabulary) to communicate effectively with a variety of audiences and for different purposes.

COMMUNICATION STRATEGIES

Students employ a wide range of strategies as they write and use different writing process elements appropriately to communicate with different audiences for a variety of purposes.

APPLYING KNOWLEDGE

Students apply knowledge of language structure, language conventions (e.g., spelling and punctuation), media techniques, figurative language, and genre to create, critique, and discuss print and nonprint texts.

EVALUATING DATA

Students conduct research on issues and interests by generating ideas and questions, and by posing problems. They gather, evaluate, and synthesize data from a variety of sources (e.g., print and nonprint texts, artifacts, people) to communicate their discoveries in ways that suit their purpose and audience.

DEVELOPING RESEARCH SKILLS

Students use a variety of technological and information resources (e.g., libraries, databases, computer networks, video) to gather and synthesize information and to create and communicate knowledge.

MULTICULTURAL UNDERSTANDING

Students develop an understanding of and respect for diversity in language use, patterns, and dialects across cultures, ethnic groups, geographic regions, and social roles.

APPLYING NON-ENGLISH PERSPECTIVES

Students whose first language is not English make use of their first language to develop competency in the English language arts and to develop understanding of content across the curriculum.

PARTICIPATING IN SOCIETY

Students participate as knowledgeable, reflective, creative, and critical members of a variety of literacy communities.

APPLYING LANGUAGE SKILLS

Students use spoken, written, and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion, and the exchange of information).

Technology in the Classroom and Education Reform

Do we really need to use technology in the language arts classroom?

Here are the stages we typically go through in applying new technology:

Stage One: Use technology to do things we already do

- Glorified flash cards for skill drill
- Word processing for typing
- Using spreadsheets for calculators

Stage Two: Use technology to improve on tasks we already do

- Improve instruction by keeping track of progress
- Increase motivation
- Individualize instruction
- Personal Publishing
- Developing Creative Products

Stage Three: Use technology to do things that were not previously possible

- Real-time manipulation of data - graphs/charts
- Create professional multi-media products
- Instant global communication
- Help with students who have special needs

Parent and Student Pressure to Change Schools

- Parents see discrepancy between what is taught in schools and what goes on in the real world of work
- Students know more than the teachers about technology

Professional and Business Pressure to Change Schools

- Teacher peer pressure to have access, participate in current technology, and share through electronic communication
- Businesses want to prepare future work force with information age skills

Political Pressure to Change Schools

- World competition - America must compete!
- Government agencies require knowledge of technology in education
- Rigorous teacher licensure requirements in California

Classifications of Educational Technologies

- Used as a tutor - Student answers questions or solves problems in sequenced learning
- Used to explore - Student discovers through interactive information, demonstration, or simulation
- Applied as a tool for accomplishing tasks
- Used to communicate - Student retrieves and sends information electronically

How Technologies Can Affect Learning

- Cognitive Tools - Applications that can be used to engage and enhance thinking
- Publishing
- Databases
- Spreadsheets
- Problem Solving
- Cooperative Grouping
- Interactivity

How Technologies Facilitate Instruction

- Tools for Facilitating Instruction
- Drill and Practice
- Tutoring
- Simulations
- Interactive Multimedia
- Integrated Learning Systems

Technologies for Communication

- Tools for Facilitating Communication
- Presentation Tools
- Telecommunications
- World Wide Web and Hypertext

Approach to Instruction

CONVENTIONAL

- Teacher directed
- Teacher dispenses knowledge
- Students work individually
- Students grouped by ability
- Students assessed on knowledge of facts

REFORMED

- Students explore
- Teacher facilitates
- Students work collaboratively
- Students grouped heterogeneously
- Students assessed on performance according to standards - criterion based

Resource - Ryan and Cooper - Those Who Can, Teach

Constructivism

Education Reform focused on research to determine how students learn. The emphasis moved toward the cognitive sciences during the 1980s. Behaviorism had been the dominant theoretical focus of the 1960-1970s. Brain research was helping educators and researchers develop new ways of understanding how students learn. Education reform emphasized meaningful learning rather than rote memorization. Constructivism emphasized the importance of critical thinking, authentic learning, cooperative groups, exploration, creativity, and metacognition - encouraging students to think about their learning. I've provided some key points about various theories discussed in teacher preparation courses. The focus of education reform was on creating standards for each subject matter area and grade level determining what a student should know and be able to do. Teacher standards were developed as well. Teacher training emphasized pedagogically effective practices, as well as subject matter competence.

These mind maps illustrate the difference between old and new schools of thought and the constructivist approach to teaching and learning. Many educators struggled to make changes in the public schools based on research as part of educational reform. Graphic Source: Global School Net - http://www.gsn.org (Page no longer active)

OLD SCHOOL

NEW SCHOOL

- Teacher directed
- Teacher dispenses knowledge
- Students work individually
- Students grouped by ability
- Students assessed on knowledge of facts
- Students memorize and test recall
- Students read and answer questions at the end of the chapter

- Students explore
- Teacher facilitates
- Students work collaboratively
- Students grouped heterogeneously
- Students assessed on performance according to standards - criterion based
- Students complete authentic tasks
- Students solve problems and create products

Constructivism

- Basic Principles
  - Knowledge is physically constructed by learners who are involved in active learning.
  - Knowledge is symbolically constructed by learners who are making their own representations of action.
  - Knowledge is socially constructed by learners who convey their meaning making to others.
  - Knowledge is theoretically constructed by learners who try to

explain things they don't completely understand.
- Students construct new ideas by incorporating new material into the concepts and thought processes already in place.
- Allow student thinking to drive lessons
- Ask thoughtful, open-ended questions
- Encourage metacognition - thinking about how they are learning
- Encourage students to interact with each other and YOU – Cooperate and Collaborate.
- Reflect and Predict!

Four Step Process to Teaching - Constructivism for Teachers

- Teacher presents an invitation to learn - CAPTURE ATTENTION!
- Teacher gives students opportunity to explore, discover, and create
- Students propose explanations and solutions
- Students take action on what they have learned.

<u>Constructivism and the 5 "E's"</u>

Check out the Miami Museum of Science Website -
http://www.miamisci.org/ph/lpintro5e.html

- Engage - Make connections and get their attention!
- Explore - Get involved, share, and explore the phenomenon - driven by student inquiry..
- Explain - Use language and logic. Introduce terminology.
- Elaborate - Make connections to other related concepts and apply understanding to world around them.
- Evaluate - Provide concrete evidence of understanding

OPTIONAL: Click on this link to the Institute for Learning Technologies and read this digitally published article - <u>The Educator's Manifesto. Renewing the Progressive Bond with Posterity through the Social Construction of Digital Learning Communities</u>

McClintock. R. The Educators Manifesto: Renewing bond with posterity through the social construction of digital learning communities. (1999). Institute for Learning Technologies, Teachers College, Columbia University. Pre-publication Draft. Retrieved February, 2000 from: http://www.ilt.columbia.edu/Publications/manifesto/index.html

Technology in the Classroom and Education Reform

- Overview of Technology and Education Reform - http://www.ed.gov/pubs/EdReformStudies/EdTech/overview.html

- Classification of Educational Technologies -
  http://www.ed.gov/pubs/EdReformStudies/TechReforms/chap2a.html
- Chapters 1 - 2 (Follow web pages through chapter sections using next button on bottom of each HTML page)
  http://www.ed.gov/pubs/EdReformStudies/TechReforms/chap1a.html
- Elements of School Reform -
  http://www.ed.gov/pubs/EdReformStudies/TechReforms/chap1b.html

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No Child Left Behind and Enhancing Education Through Technology

From the No Child Left Behind Website....

*On Jan. 8, 2002, President Bush signed into law the No Child Left Behind Act of 2001 (NCLB). This new law represents his education reform plan and contains the most sweeping changes to the Elementary and Secondary Education Act (ESEA) since it was enacted in 1965. It changes the federal government's role in kindergarten-through-grade-12 education by asking America's schools to describe their success in terms of what each student accomplishes. The act contains the President's four basic education reform principles: **stronger accountability for results**, increased flexibility and local control, expanded options for parents, and an emphasis on teaching methods that have been proven to work.*

http://www.nochildleftbehind.gov/

No Child Left Behind (NCLB)

- Examine both the U.S. Department of Education and No Child Left Behind Websites for current federal policy regarding education.
- U.S. Department of Education website focus on "No Child Left Behind." http://www.ed.gov/
- The No Child Left Behind Website - http://www.nochildleftbehind.gov/

Enhancing Education Through Technology (EETT)

The current administration's focus as a part of NCLB is on EETT grants funded through the states. In order to qualify for federal monies for technology, each state is required to develop a Education Technology Master Plan. A major emphasis is on using technology to promote student learning of subject matter content. In addition, equal access to technology for all students is required. Notice the Digital Divide in California as of 2003. Read the California Vision - Closing the Gaps" from the state master plan below.

EETT Websites

- Federal Legislation http://www.ed.gov/legislation/ESEA02/pg34.html
- Look for specific tech elements!
  http://www.ed.gov/offices/OESE/esea/nclb/partx.html
- California EETT Guidelines -
  http://www.cde.ca.gov/edtech/eett/requirements.htm

California Education Technology Master Plan

"The purpose of the Education Technology Master Plan is to provide a vision for the state on how to effectively use and support educational technology to improve student achievement, close the gaps in access to educational technology, and move California schools to at least parity with or exceed the level of technology integration in other states. The Education Technology Master Plan sets forth goals and recommendations for state policymakers to help educators attain higher levels of educational technology integration by the year 2008. Achieving higher levels of educational technology integration will close the gaps in access to improved curriculum, instruction, and assessment; professional development; and infrastructure statewide."

Digital Divide in California - 2003
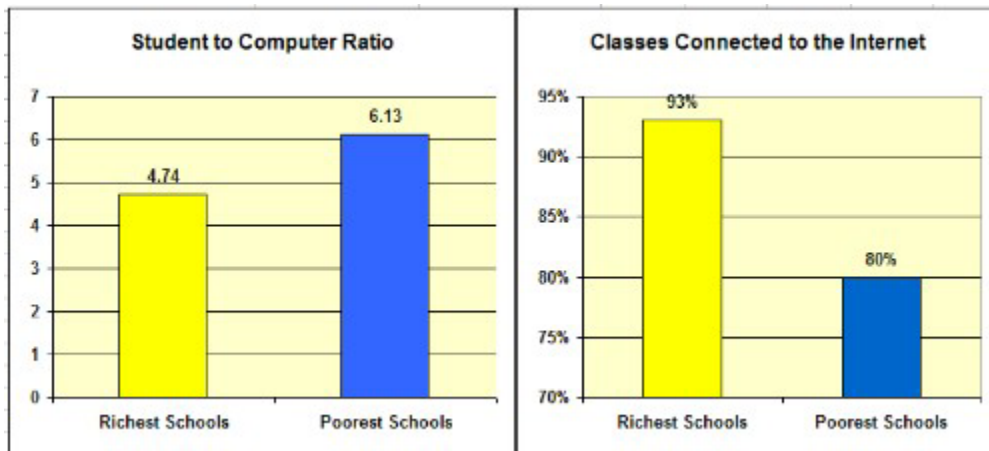
"All students should have access to state of the art technology and rigorous and effective digital content. Although the "digital divide" gap is closing, California schools still struggle with digital inequities.

- Students living in poverty continue to have less access to better technology.
- Survey results indicate that students attending the "richest" schools in California have a student-to-computer ratio of 4.74, as compared to a ratio of 6.13 for the poorest schools.
- Schools with high poverty levels reported fewer classrooms connected to the Internet (80%) as compared to schools with low poverty levels (93%).

- Federal educational technology programs, such as the E-rate program and the Technology Literacy Challenge Grant Program, have made efforts to target high poverty schools and the data shows marked improvements in access and connectivity in even the poorest schools as compared to two years ago.
  - In the last two years, the number of high poverty schools connected to the Internet increased from 74% to 96%, which almost equals the same percentage as for the "richest" schools (97% in 2002).
  - Number of classrooms connected to the Internet for the poorest schools, made significant gains, increasing from 39% to 80%.

"As California plans for the future, policymakers must recognize the technology investment that the state has made in our schools and understand that the recommendations in this report aim to maximize that investment by putting the power of technology into the hands of all teachers, students, and administrators."

Goals and Recommendations for Student Achievement

Vision for California: Closing the Gaps

Closing the gaps in access to technology that enhance and enable teaching, learning and leadership, will help all students achieve mastery of the State Academic Content Standards throughout California, providing students a future of choices and a choice of futures.

Curriculum, Instruction, and Assessment: Ubiquitous Technology and Mastery of Academic Standards

Closing the gaps in access to rigorous and effective digital content aligned to the State Academic Content Standards and fully integrated into curriculum, instruction, and assessment will help ensure that all students are prepared to meet the present and future needs of California.

Equity and Access

Goal: All students and educators will have ubiquitous access and the ability to utilize rigorous and effective digital content.

Rationale: Technology may be used effectively to facilitate the distribution and broaden the delivery of rigorous and effective digital content throughout California. The digital divide that stretches across many communities is not only related to hardware and

connectivity, but also to rigorous and effective digital content. Traditionally, students in the least advantaged schools also have had the least access to rigorous and effective digital content. Closing this knowledge gap requires the state to ensure that rigorous and effective digital content is accessible and utilized by all students and teachers to assist students in meeting and exceeding the State Academic Content Standards. Importantly, technology allows all students, including English language learners and those with special needs, the opportunity to participate fully in education. Ensuring equity and access to rigorous and effective digital content allows students and teachers to be both users and producers of academic content and innovative curriculum and assessment, furthering efforts to improve student achievement.

Standards

Goal: All educators will fully integrate into their practice appropriate educational technology and rigorous and effective digital content to promote mastery of the State Academic Content Standards by all students.

Rationale: Educational technology and digital content, aligned to State Academic Content Standards, enable students and teachers to address individual learning needs (e.g., age, disabilities, ability level, special needs) using multiple approaches to rigorous and effective content. Learning flexibility increases the opportunities for all students to achieve mastery of the State Academic Content Standards. Educational technology promotes this flexibility, along with collaboration, innovation, applied and contextual learning, and has been shown to increase student achievement. Moreover, educational technology makes possible data collection, analysis and real-time assessment of learning, of which provide educators with necessary feedback loops that assist in identifying and targeting the individual learning needs of students.

Technology Literacy

Goal: All students will develop information and technology literacy skills that enable them to meet and exceed the demands for an information and technologically literate workforce.

Rationale: The knowledge economy age requires that workers be information-literate, "a person must be able to recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information."10 Workers must also have knowledge of and proficiency with numerous technologies (e.g., hardware, programs, applications) and the vast resources available through the Internet and the World Wide Web. (Need to include reference to the Secretary's Commission on Achieving Necessary Skills (SCANS) Report) Students who are the workers of tomorrow must learn to develop the skills that will enable them to use the technological tools available and to understand the information gleaned and analyzed by the technology. Ensuring students develop information and technology literacy will help to ensure the state's economic competitiveness in the 21st Century.