Slide 1

SHELLY CASHMAN SERIES®

Teachers Discovering Computers
Integrating Technology and
Digital Media in the Classroom
6th Edition

Chapter 7 Evaluating Educational Technology and Integration Strategies

Remember to Read and Outline the Chapter AND the
Special Feature Article and Include Page Numbers

Slide 2

Chapter Objectives (slide 1 of 2)

- **Identify sources of information** for evaluating educational technology and digital media
- **Outline the considerations** and tools used to evaluate software applications
- **Describe and explain** the key criteria used to evaluate Web resources
- **Describe the tools** for evaluating the effectiveness of technology
- **Compare and analyze** the methods used to evaluate student projects

Slide 3

Chapter Objectives (slide 2 of 2)

- **Identify** different technology integration strategies by classroom layout and design
- **Define and describe** the value of a curriculum page
- **Describe** ways to integrate technology into specific curriculum subject areas
- **Describe** authentic assessment tools for student projects
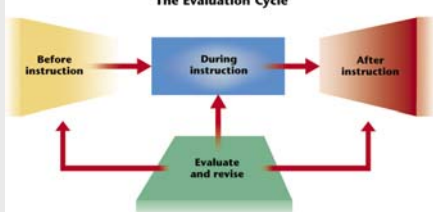- **Identify and compare** possible sources of funding for classroom technology

Slide 4

Evaluating Educational Technology

- Determining if the technology is appropriate and enhances the teaching and learning process
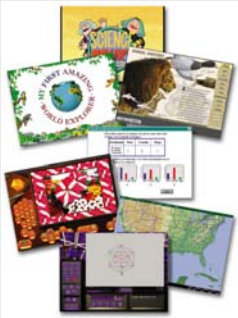- Evaluate before, during, and after instruction

The Evaluation Cycle

Before instruction → During instruction → After instruction → Evaluate and revise

Slide 5

Evaluating Educational Technology

- Numerous resources and technologies to choose from

- School districts and state Departments of Education have
  - **Lists of recommended software**

Slide 6

Evaluating Educational Technology

- **Professional educational organizations**
  - Local, state, regional, national, and international educational organizations

  - Web sites for organizations

Evaluating Educational Technology

- **Catalogs**
  - Provide information about how to use products
  - Free by request
- **Colleague Recommendations**
  - Discuss issues with other educators
  - Unbiased, first-hand experience
- **Published evaluations**
  - See company's Web site
  - Educational journals

Evaluating Educational Technology

- **Conferences**
  - National and state organizations

  - Presentations

  - Exhibitors: Meet representative from hardware and software companies

Evaluating Educational Technology

- **The Web**
  - Mailing lists
    - EDTECH
  - Forums
  - Newsgroups
  - Discussion groups
  - Listservs
  - Wikis
  - Blogs
  - Webinars

Evaluating Educational Technology

Evaluating Software Applications

- Free trial versions
- Software evaluation **rubrics**
  - Detailed assessment tool

-See rubric next slide

Evaluating Educational Technology

Evaluating Software Applications

- **Content**
  - Is the software valid?
  - Relate content to school's and state's specific curriculum standards and related benchmarks
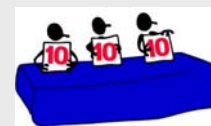
Evaluating Educational Technology

Evaluating Software Applications
- **Documentation and technical support**
  - **Documentation**- Printed or online information
  - **Technical support**- Telephone or Web support

Evaluating Educational Technology

Evaluating Software Applications
- **Ability levels and assessment**
  - Can software be used with various ability and academic levels?
  - Can software adjust the academic level and students move through the skills

Evaluating Educational Technology

Evaluating Software Applications
- **Technical quality and ease of use**
  - **Technical quality**
    - How well the software presents itself and how well it works
  - **Ease of use**
    - User friendliness
  - **Student opinion is important in these criteria**

Evaluating Educational Technology

Evaluating Web Resources

- **Authority**
  - Is the author clearly identified?
  - Examine the credentials of the author or organization of the Web site
  - Has the author or organization listed experience, position, education, or other credentials?

Evaluating Educational Technology

Evaluating Web Resources

- **Affiliation**
  - Who is the Web site associated with?
  - Examine the URL and domain name

Evaluating Educational Technology

Evaluating Web Resources

- **Purpose and Objectivity**
  - Is the content provided as a service?
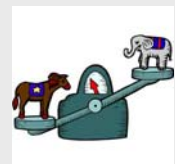 - Is the content unbiased?
    - Typically avoid religious/ political affiliated sites.

Evaluating Educational Technology

Evaluating Web Resources

- **Content and Learning Process**
  - Is the content valid and appropriate?
  - Does the information relate to your needs?
  - What topics are covered?
  - For what level is the information written?
  - Do the links within the site add value?

Evaluating Educational Technology

Evaluating Web Resources

- **Audience and currency**
  - Is the content suitable for your students?
  - Is the content up to date and timely?
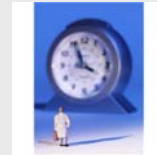
Evaluating Educational Technology

Evaluating Web Resources

- **Design**
  - Web effectiveness
  - Web Evaluation Rubric
  - Student Web Site Evaluation Form

  -sample forms on next slide

Evaluating Educational Technology

Evaluating the Effectiveness of Technology Integration

Assessment Tools for Evaluating the Effectiveness of Technology Integration

- Measure student performance
- Reliable assessment

- **Traditional assessment**
  - Testing

Evaluating the Effectiveness of Technology Integration

Assessment Tools for Evaluating the Effectiveness of Technology Integration
- **Alternative assessment**
  - Authentic assessment (performance based assessment)
  - Project-based assessment
  - **Portfolio** assessment
  - Checklist
  - Rating scale
  - Rubric

Evaluating the Effectiveness of Technology Integration

Tools for Evaluating the Effectiveness of Technology Integration

- **Teacher observation**
  - Observe motivation
  - Observe how long students work on an objective

Evaluating the Effectiveness of Technology Integration

Evaluating Technology-Based Student Projects

- **Integrated learning systems (ILS)**
  - Automatically track student progress

- **Assessment rubric**

Evaluating the Effectiveness of Technology Integration

Evaluating Technology-Based Student Projects

- **Evaluating content**
  - Based on your standards and benchmarks
  - Review punctuation, grammar, spelling, coverage of material, presentation of the material in a logical order, and specific information about the author

Evaluating the Effectiveness of Technology Integration

Evaluating Technology-Based Student Projects

- **Evaluating planning**
  - How do you want your students to plan?
  - What tools will the students use?
  - Software tools (Inspiration)
  - Visual learning techniques

Evaluating the Effectiveness of Technology Integration

Evaluating Technology-Based Student Projects

- **Evaluating planning**
  - Flowcharts
  - Concept map or story web
  - Storyboard

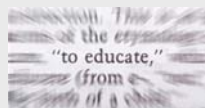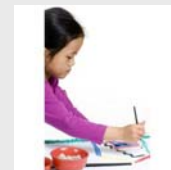## Evaluating the Effectiveness of Technology Integration

Evaluating Technology-Based Student Projects

- **Evaluating creativity**
  - Evaluate originality, imaginative and innovative approach, and artistic abilities
  - Color, clip art, and artwork should strengthen content

Evaluating the Effectiveness of Technology Integration

Putting it All Together - Evaluating Technology Integration

- **Ms. Vicki Osborne's classroom**
  - One computer and 26 students
  - Block schedule

Evaluating the Effectiveness of Technology Integration

Putting it All Together – Evaluating Technology Integration

- **Ms. Vicki Osborne's goals for the lesson**
  - Students work in groups
  - Use reference materials and Web resources
  - Identify three major campaign issues
  - Provide personal facts about the candidate
  - Create a group digital media presentation
  - Use correct grammar, spelling, and punctuation

Evaluating the Effectiveness of Technology Integration

Putting it All Together - Evaluating Technology Integration

- Ms. Vicki Osborne's **lesson**
  - Brainstorm to develop a concept map
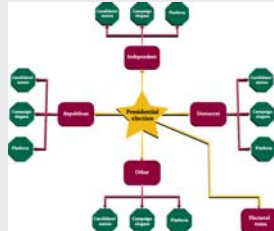
Evaluating the Effectiveness of Technology Integration

Putting it All Together - Evaluating Technology Integration

- Ms. Vicki Osborne's **lesson**
  - Evaluation rubric
  - Flowchart or storyboard
  - Work in groups in 40-minute blocks
  - Each group presents their project in the media center

Integration Strategies

- Teachers must become facilitators of learning
- Use technology to enhance learning environment
- Put technology at point of instruction
- Many mixtures of technology

Integration Strategies
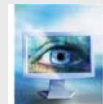
- **One-Computer Classroom**
  - Use the computer for classroom presentations and demonstrations
  - Introduce new concepts
  - Students use to present assignments, projects, and research activities to the entire class
  - Maintain class records, create presentations and projects, do research, and communicate with other teachers

Integration Strategies

One-Computer Classroom
- Internet access
- Educational application software
- Enhance lectures and presentations
- Use the computer as a teaching assistant
- Foster group and cooperative learning
- Write an ongoing story
- Create a class blog
- Start a class newsletter
- Maintain a student database
- Teacher productivity tool
- Optimize computer lab time
- New emerging technologies

Integration Strategies

Multicomputer Classroom
- Multiple learning centers
- Integrate other technologies
- Miss Julie Davis' classroom
  - Digital camera
  - Web research centers
  - Develop presentations
  - Microsoft Publisher

Integration Strategies

- **Computer Labs**
  - All students have hands-on experience
  - Often used to teach technology skills or subject-specific skills
  - Integrate computer-related skills into subject-directed curriculum areas
  - Example: Web scavenger hunt

Curriculum Integration Activities

- **Curriculum Pages**
  - Strategy for implementing the Internet into the classroom
  - Teacher created document that contains hyperlinks to teacher-selected-and-evaluated sites that are content and age appropriate
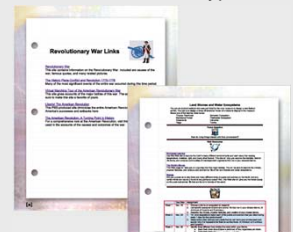
Curriculum Integration Activities

- **Creating Lesson and Project Plans**
  - Must integrate technology into lesson plans and activities
  - Educator's Reference Desk
  - Lesson plans and activities can be found on the Web

Curriculum Integration Activities

Creating Lesson Plans
- **Language arts integration**
  - Reading, writing, listening, viewing, speaking, and literature
    - *Extra! Extra! Know All About It.*

- **Social studies integration**
  - History, geography, civics, and economics
    - *What Wonderful Webs We Weave*

Curriculum Integration Activities

Creating Lesson Plans

- **Mathematics integration**
  - Basic number concepts, measurements, geometry, algebra, calculus, and data analysis
    - *The Business of Professional Sports*

- **Science integration**
  - Physical sciences, earth and space sciences, and life sciences
    - *Let's Think as a Scientist*

Curriculum Integration Activities

Creating Lesson Plans

- **Physical education and health integration**
  - Basic health and physical education literacy
    - *Eating Healthy!*
- **Arts integration**
  - Visual and performing arts including drawing, painting, dance, music, and theater
    - *The Theory of Color*

Curriculum Integration Activities

Creating Lesson Plans

- **Exceptional education integration**
  - All curriculum areas with adaptations made for students with special characteristics or special needs
    - *Rain Forests Are in Trouble*
- **Interdisciplinary Integration**
  - Includes two or more academic disciplines or curriculum areas to form a cross-discipline or subject-integrated lesson
    - *Natural Disasters Occur Everywhere*

Finding Funds to Support Classroom Technology Integration

- Many school districts do **not** have sufficient funding for technology
- If school cannot provide funds, turn to the public, industry, and the government

Finding Funds to Support Classroom Technology Integration

- **Fund-raising Drives and Contests**
  - Partner with local businesses
  - Small amounts of money can go a long way
  - Enter contests to win equipment
  - Involve parents and community
    - Showcase students' use of technology
- **Volunteers** -to donate computer repair services

Finding Funds to Support Classroom Technology Integration

- **Grants**
  - Funds provided by a funding source that transfers money, equipment, or services to the grantee
  - **Grantee** is the teacher, school, or organization
  - **Sources:**
    - Department of Education
    - Federal Sources
    - Foundations
    - Corporations
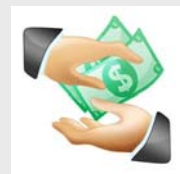
Finding Funds to Support Classroom Technology Integration

Grants

- Request for proposal (RFP)
- Grant proposal
- Look for opportunities on the Web

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**Chapter 7 Complete
Evaluating Educational
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