Overview – Educational Technology & The NJTAP-IN Process

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What do we do?
The Office of Educational Technology

- **TEACHERS FACILITATING INSTRUCTION**
- **STUDENTS ACTIVELY LEARNING**

8.1 Computer & Information Literacy reporting

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NCLB Title II-D

Tech Plan, Survey

Tools and Strategies

ED TECH

leaders

teachers

students

Professional Development

Infrastructure

NJPEP, Title II-A
Federal Requirements

- Create new technology infused learning environments to support student academic achievement

- Every student will be technologically literate by the end of grade eight

- Establish research-based instructional methods that can be widely replicated …
Federal Requirements

- Local Technology Plan

- Reporting Requirements
  - Performance Report
  - School Report Card
    - Computer Count
    - Technological Literacy
Other Data Collection

- New Jersey Public School Technology Survey
  - Critical information for targeting state initiatives
  - Supports State and Local Technology Plans
Create new technology infused learning environments to support student academic achievement

Formula/Discretionary Grants
Title II-D Discretionary Grants

- **STAR-W:**
  Students using Technology to Achieve Reading & Writing

- **ACE Plus:**
  Access ~ Collaboration ~ Equity Plus instruction

- **MATRIX:**
  Math Achievement To Realize Individual eXcellence

- **KOOL:**
  Kids Officially OnLine

- **INCLUDE:**
  The Implementing New Curricular Learning with Universally Designed Experiences

- **TIME:**
  Technology Infused Math Education
“... build technology into the daily routine in ways that make sense. ... use technology as a logical tool in demonstrating mastery of educational objectives and standards.”
WHY?
“…the world’s body of knowledge doubled between 1800 and 1900. In 1940, the doubling rate was every 20 years and by 1970 it was every seven. Now it is estimated that knowledge doubles every two years. And it is predicted that, by 2015, our collective body of knowledge will double every 35 days.”

- Robert Cornall, Queensland University of Technology, Feb 2008
Comparative Rates of Change

- Business: 100 MPH
- American Family: 60 MPH
- Government Institutions: 25 MPH
- American Schools: 10 MPH
- The Law: 1 MPH

- Alvin & Heidi Toffler, *Revolutionary Wealth*
All Content Standards are changing!
How will they change?

- Integration of **21st Century Knowledge and Skills** by incorporating a strong emphasis on:
  - Technology integration
  - Interdisciplinary connections
  - Infusion of global perspectives
Are students learning the way they need to learn?
“Integrating 21st century skills into K-12 education empowers students to learn and achieve at the level necessary to succeed in this century. Education will become both more invigorating and relevant when it reflects the realities and challenges of contemporary life.”

John Wilson, Executive director of the NEA
If a child can't learn the way we teach, maybe we should teach the way they learn.

- Ignacio Estrada
Are we engaging students?

http://www.edutopia.org/sir-ken-robinson-creativity-part-two-video
We are asking all educators to understand these ideas, embrace these ideas and succeed in effectively implementing these ideas… with support!
NJTAP-IN

New Jersey Technology Assessment for Proficiency and Integration
Key areas that were considered when developing the recommendations…
Remain focused on providing support to teachers in the classroom to effectively integrate technology into routine classroom practices.
TEACHERS
Must not view THIS as

One More Thing To Do
Districts must not incur substantial costs
Effective technology integration within all content areas

Resources must be provided to support all students in obtaining tech skills within the content area.
Why Assess Students?

- NCLB mandate
- N.J.A.C.
Requires assessment by districts/schools of all CCCS

- District boards of education shall be responsible for assessing and publicly reporting on the progress of all students in developing the knowledge and skills specified by the Core Curriculum Content Standards, including content areas not currently included in the Statewide assessment program.
NJTap-In is a combination of identified strategies, instruments and resources that can be used to address student technology literacy as part of effective integration of technology into classroom instruction.
All students, no matter which district or school they attend, will be able to achieve the Core Curriculum Content Standards because they will have unlimited access to people, to a vast array of curriculum and instruction, and to information and ideas -- no matter where they exist.

-- This Belief Statement is the ultimate goal of all New Jersey Educational Technology programs and grants.

Excerpt from the NJ Educational Technology Plan
1. NJTAP-IN General Information
   a. Brochure
   b. Summary

2. NJTAP-IN Details
   a. NJTAP-IN’s Implementation Plan*
   b. Evaluation Tools
      i. Fourth Grade Checklist of Skills*
      ii. Student Readiness Rubric
      iii. NJTAP-IN General Rubric*
      iv. Student Friendly Grade 5-8 Rubric*
      v. Classroom-based Recording tool*

* Items available directly through NJDOE only

3. Professional Development Modules
   (COMING SOON)
   a. Short Module (50 minutes)
   b. Longer Module (90 minutes)

4. Technological Literacy Integration Systems (TLIS)
   a. Request for Information (RFI) For vendors only
   b. Products that meet the criteria of a technological literacy integration system

5. List of NJTAP Pilot Districts
   a. Lessons Learned (COMING SOON)

6. Other Resources
   a. Frequently Asked Questions (FAQ)
   b. Technology Literacy Pilot - (Social Studies, 7th Grade Prompts - COMING SOON)
   c. Other Assessment options
   d. Universal Design for Learning (UDL)
   e. District designed tools and strategies (COMING SOON)

    i. Skills Array
    ii. Scope and Sequence
    iii. Horizontal Design – sorted by 8.1 Standard
    iv. Crosswalk – sorted by all core curriculum content standards
    v. Computer and Information Literacy Frameworks
<table>
<thead>
<tr>
<th>Elementary School</th>
<th>Middle/Junior High School</th>
<th>High School</th>
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<tbody>
<tr>
<td>Ask Me to Keyboard My Name</td>
<td>Checkbook</td>
<td>Buying a Cell Phone</td>
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<td>Caribbean Island Adventure</td>
<td>Creating a Business Letter</td>
<td>Career Planning Project</td>
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<td>Famous Women in History</td>
<td>Creating a State Tourism Brochure</td>
<td>Career Preparation</td>
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<td>Technology Solves Problems</td>
<td>Crossing the Border</td>
<td>Cast Away at the Edge of the World</td>
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<td>Fall Haiku</td>
<td>Electronic Toys</td>
<td>Create a City Street Using Two-point Perspective</td>
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<td>The Five Senses</td>
<td>Engineering Motion</td>
<td>Create an Isometric Drawing</td>
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<td>Where Do You Eat Thanksgiving Dinner?</td>
<td>Energy</td>
<td>Designing Your Bedroom</td>
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<td>Keyboarding Practice</td>
<td>Earth's Final Frontier</td>
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<td>My Life: An Autobiographical Timeline</td>
<td>Globalization and Its Impact on the Earth's Food Supply</td>
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<td>Our Solar System</td>
<td>Houston, We Have a Problem &amp; Failure Is Not An Option</td>
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<td>Surveying: can My Input Make a Difference?</td>
<td>In Our Own Backyard</td>
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<td>Systems in the Designed World</td>
<td>Making Millions</td>
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<td>Telemarketing for the &quot;New&quot; Local Phone Company</td>
<td>Internet Safety in the High School Classroom</td>
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<td>Transportation – Mass-Transit - MAGLEV</td>
<td>What Will It Take to Live On Your Own?</td>
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<td></td>
<td>Web Site Evaluation</td>
<td>Which Well Works?</td>
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</table>

A possible way of assessing a student's overall skills in technological literacy is through the use of a portfolio. See Chapter 3 of the New Jersey Cross-Content Workplace Readiness Curriculum Framework: A Road Map for Learning found at [http://www.nj.gov/njded/frameworks/ccwr/](http://www.nj.gov/njded/frameworks/ccwr/).


To learn more about project-based learning refer to Chapter 2 of the New Jersey Cross-Content Workplace Readiness Curriculum Framework: A Road Map for Learning found at [http://www.nj.gov/njded/frameworks/ccwr/](http://www.nj.gov/njded/frameworks/ccwr/).
The Recommended Technological Literacy Assessment Process

A 10-STEP PROCESS
The Process...

1. **Align the curriculum to the 8.1 standard**
   **Recommendation:**
   a. Use the available resources to identify and align to what is already being done! (Skills Array, Horizontal Design & Crosswalk)
   b. Identify missing items from the curriculum.

2. **Meet with the school staff – show them that they are already doing some things!**
   **Recommendation:** Develop your district’s skills array and Share.

3. **Evaluate students regularly** (Scope & Sequence, etc…)
   **Recommendation:** Evaluate all students - across all grade levels
4. Assess Students

*(Use any method decided by the district)**

**Recommendation:** Answer the following questions…

a) When will students be assessed (time of year, start with one content area, start with one grade level or by teacher)?

b) How will the scores be tracked from grade to grade?

c) Who is responsible for tracking the scores?

d) Assess students **INDEPENDENTLY!**

e) **TOOL?**

1) portfolio assessment/ PBA with rubrics

2) Purchased Application

3) Combination of the two above

4) other
Other available tools…

- NJTAP-IN Fourth Grade Checklist
  
  **Recommendation:** Use during the first quarter of school year for benchmarking then each year same time. *Use teacher initials and date or some other accountability method.*

- Student Readiness Rubric

- NJTAP-IN General Rubric
  
  **Recommendation:** *use rubric-related activities in the content area.*
Types of Available Instruments

- Commercial Products-
- Locally-developed
- “Buddy up” with existing instruments developed by school districts
- Free web-based instruments
- NJTAP-IN
- Combination of the above
Ways to assess...

- One rubric for both technology and content area assessment
- Two rubrics – content area and technology
- Assess by only content area teacher
- Assess by both content and computer teacher
- Assess by only the computer teacher
5. Be prepared with answers to various questions that impact the process.

a) How do we ensure students who are not proficient by the end of grade 8 are assisted to become proficient and progress to the grade 12 benchmark?

b) What happens if students enter into the school in 7th, 8th grade or mid-year?

c) What happens if a student leaves and returns to the school?

d) Develop a “what if” plan – what if students are not proficient at the end of the eighth grade?

e) Etc…
6. Adopt a protocol to “Assess Student Work” - example

The LASW Protocol:


a) Form a team of scorers

b) Score student work independently & then discuss reason for scores.

c) Reach a scoring consensus from the team.

d) Tweak the criteria/tool/rubric.

e) Let students know what is an “A” answer. Make sure the students understand what constitutes a specific rating before the project is given.
7. ‘Map’ the students’ technological literacy outcomes (test results, teacher scores, etc…) to the NJTAP-IN rubric and the scores for each indicator are totaled.

8. Keep records of/track the scores of each student to address those areas that are not technologically proficient.

9. Identify a single count of those that are proficient and make note of the tools used for assessing students in grades 4 and 8.
10. Report to NJDOE annually on the NJDOE School Report Card Data Collection in October of the year the 8th graders graduate.
8th grade technological Literacy
Does this school have any 8th grade students? Y or N
Total number of 8th grade enrollment numeric field 4 bytes
Total number of students assessed numeric field 4 bytes
Total number of students not assessed numeric field 4 bytes
Explain why students were not assessed 70 characters
Total number of students in 8th grade that are technologically proficient (numeric field 4 bytes)
What assessment tool was used Drop down box
  1. District/Teacher developed authentic assessment
  2. District standardized non-authentic assessment
  3. Computer-based assessment software
  4. Online/web-based assessment
  5. Other

4th grade technological Literacy
Does this school have any 4th grade students? Y or N If Yes answer questions below.
How are students assessed for the 4th grade Cumulative Progress Indicators for Computer and Information Literacy (CCCS 8.1) Drop Down Box
  1. District/Teacher developed authentic assessment
  2. District standardized non-authentic assessment
  3. Computer-based assessment software
  4. Online/web-based assessment
  5. Other
QSAC & NJTAP-IN collaboration
Various technology support models exist in NJ...

- Teacher uses technology and students watch or do a few things on the whiteboard
- Students are scheduled with a computer teacher for a computer class (content area teacher in the room) – same scenario with content area teacher not in the room.
More models…

- Students scheduled in computer lab by content area teacher – computer lab teacher/tech coordinator helps as needed with the technology usage OR co-teaches.

- No computer lab - computer lab teacher or tech coordinator goes in class to assist content area teacher

- No computer lab – content area teachers integrates fully
Key Considerations for Assessing Technology Literacy
Considerations

- In what grade levels do the students have the opportunity to learn the skills to meet the 8.1 standard?
- Where are your students now – in terms of technological literacy?
- What is the grade level where the students’ assessment scores be reported?

Recommendation:

- Develop “Skills Array”.
- Determine baseline literacy.
- The district should not begin the assessment with 8th grade students.
Considerations

- Where should teachers’ computer and information literacy skills be compared to the students’ computer and information literacy skills?

- Is there an understanding by all teachers that their technological literacy skills are not the same as their skill level to integrate technology into classroom instruction?

Recommendation

- Determine the teacher’s technological literacy/implementation skill level in order to provide professional development on effective integration practices.
Considerations

If using the NJTAP-IN rubric for assessment…

- Do teachers understand how to use rubrics?
- Do teachers know how to integrate technology into their lessons?

Recommendation

- Some teachers will not understand how to ascertain a score for the items on the rubric or may not know what they mean. Professional development is necessary.
Considerations

- When should professional development occur? It may occur in different settings – district-based training centers, in-class demonstration, small group workshops, in participation with the ETTC, online, on an individual basis, etc…

Recommendation:

- Have professional developers include technology in the existing content area training. It is not something added on!
Considerations

- Has the district considered offering incentives for teachers to increase their technological skills?

Recommended:
  - Consider a variety of different incentives because people are different – what works with one may not work with another.

- Does the principal/supervisor observe classrooms for their EFFECTIVE use of technology in class?

Recommended:
  - One way to increase the use of technology in class is by reviewing the lesson plans and discuss content to be mastered.
Considerations

- Are there opportunities for collaboration on lesson plans between the teachers and the school-based technology coordinator or technology teacher?
- Are computer teachers working with content teachers in a co-teaching or collaborative relationship for instructional purposes?
- Do teachers have peer and administrator support?

Recommendation:

- Ensure that there is common planning time or opportunities to collaborate regularly. Schedule time to collaborate and also time to administer and score the assessment – when will it happen?
Finalize the process for evaluating, assessing, ensuring objectivity and reporting students!
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