Performance-Based Assessment Measures

Helen Barrett & Peggy Kelly
Leadership Team, ISTE NETS for Teachers
A few thoughts about Assessment

• Assessment OF Learning? or
• Assessment FOR Learning?
Purposes of Assessment

- Assessment **for** learning (formative assessment) is different from assessment **of** learning (summative assessment)
Principles of Assessment FOR Learning

• Definition:
Assessment for Learning is the process of seeking and interpreting evidence for use by learners and their teachers to decide where the learners are in their learning, where they need to go and how best to get there.
www.qca.org.uk

ages 3-14

Research-based principles of assessment for learning to guide classroom practice
What are your questions about Assessing the NETS for Teachers?

Low Stakes or High Stakes?
Framework for Assessing Effective Teaching with Technology

Student Achievement

Surveys (Self Report)
Reflective Practice
Performance Tasks
Observations
Student Work

Professional Portfolio

Teacher Standards - ISTE & Teaching (i.e., INTASC)

(SETDAC, 2002)
Framework for Assessing Effective Teaching with Technology

Teacher Standards - ISTE & Teaching (i.e., INTASC)

Student Achievement

Surveys (Self Report)

SETDA, 2002
ISTE NETS Developments

• Partnerships with:

  ➡ Microsoft (NETS-S)
  Online Assessment

  ➡ IC3 Certiport
  (Internet and Computing Core Certification)
  Online Assessment (NETS-T General Preparation Profile Pilot Study)
Future NECC Presentations

• Don Knezek’s Presentation:
  Wednesday 1:30 - 2:30 PM Room 266
  “NETS & Assessment: What is ISTE Doing to Support You in Technology and Assessment”

• Lajeane Thomas’ Presentation:
  Tuesday 11:00 - 12:00 Room 338
  “NCATE/ISTE Assessment for Accreditation and National Recognition in Teacher Preparation”
NETS*T
Resources for Assessment
Writing Team Meetings

• **Tempe Meeting - December 2000**
  - Writers selected by job and expertise
  - Outcome- Dimensions of assessment

• **Dallas Meeting - July 2002**
  - Small group - selected for expertise
  - Outcome- Detailed dimensions for publication
Tools include:

1. Rubrics for Standards
2. Rubrics for Performance Indicators
3. Observation Rubrics
4. Suggested Portfolio Entries
5. Program Implementation Rubric
Tools continued....

6. **Beyond NETS for Teachers**
   - NCATE - Technology Facilitator
   - NCATE - Technology Leader

7. **Appendices**
   - Instruments
   - Templates
Chapter 1

NETS Assessment Model
National Educational Technology Standards for Teachers Assessment Model

General Preparation | Professional Preparation | Student Teaching/Internship | First-Year Teaching | Highly-Effective Teaching

Technology Operations & Concepts
Planning & Designing Learning Environments & Experiences
Teaching, Learning, & Curriculum
Assessment & Evaluation
Productivity & Professional Practice
Social, Ethical, Legal, & Human Issues

Ongoing Assessment
Performance Tasks
Observations
Documented by Portfolio

Report Card
National Board Certification

Candidate Readiness Benchmark
Initial Certification Benchmark
Experienced Teacher Benchmark
Advanced Professional Proficiency Benchmark

ISTE NETS for Teachers – Assessment Framework
February 3, 2001
Chapter 1

Role of technology in 
*No Child Left Behind* Legislation
Chapter 2

Essential Conditions

What can the rubric be used for?

- Check Perception of Individuals
- Support Self Study & Accreditation
- Justify Budget and Resource Decisions
Chapter 3

Page 33

- Performance Indicator
  Description
- Suggested Artifacts
- Rubrics to Assess NETS
How were the rubrics developed?

Performance indicators were dissected into component parts....

II.A. design developmentally appropriate learning opportunities that apply technology-enhanced instructional strategies to support the diverse needs of learners
### Developing the Rubrics

#### II.A. Planning developmentally appropriate learning activities

<table>
<thead>
<tr>
<th>CRITERIA</th>
<th>PERFORMANCE LEVEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan developmentally appropriate learning activities</td>
<td>Developing: Developmental appropriateness of planning lacks many areas of consideration or is questionable.</td>
</tr>
<tr>
<td></td>
<td>Nearly Meets: Developmental appropriateness is considered in planning but is incomplete.</td>
</tr>
<tr>
<td></td>
<td>Meets: Developmentally appropriate levels of difficulty demonstrated in content and processes (i.e., cognitive, physical development, social and emotional development);</td>
</tr>
<tr>
<td></td>
<td>Exceeds: Developmentally appropriate levels of difficulty demonstrated in content and processes (i.e., cognitive, physical development, social and emotional development). (no change)</td>
</tr>
<tr>
<td>Apply technology-enhanced instructional strategies</td>
<td>Applies one technology-enhanced instructional strategy. Students do not use the technology.</td>
</tr>
<tr>
<td></td>
<td>Applies one technology-enhanced instructional strategy with insufficient student use of technology.</td>
</tr>
<tr>
<td></td>
<td>Multiple technology-enhanced strategies that include student use of technology.</td>
</tr>
<tr>
<td></td>
<td>Multiple technology-enhanced strategies that include student use of technology.</td>
</tr>
</tbody>
</table>

*A detailed rubric is made of each performance indicator*
Performance Task Continuum
Looks at a series of performances to mark progress
Chapter 4

Teachers and teacher candidates are able to:

<table>
<thead>
<tr>
<th>NETS for Teachers</th>
<th>General Preparation</th>
<th>Professional Preparation</th>
<th>Student Teaching or Internship</th>
<th>First Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>III. Teaching, Learning, and the Curriculum. Teachers implement plans that include learning strategies and methods while applying technology to maximize student learning. Teachers:</td>
<td>Teaching, learning and the curriculum are functions of professional preparation and begin at the developing stage.</td>
<td>• Design and teach technology-enriched learning activities that connect content standards with student technology standards to meet the diverse needs of students.</td>
<td>• Design and teach a coherent lesson sequence learning activities that that integrates appropriate use of technology resources to enhance student academic achievement and technology proficiency by connecting district, state and national curriculum standards with student technology standards (as defined by ISTE NETS for Students).</td>
<td>• Plan for, implement, and evaluate management student use of technology resources as part of classroom operations and specialized instructional setting.</td>
</tr>
<tr>
<td>A. Facilitate technology-rich experiences that address content standards and student technology standards.</td>
<td>• Design and teach a lesson that meets content area standards based on current educational technology research demonstrating application of research on teaching and learning with technology</td>
<td>• Design and teach lesson that that applies learner-centered strategies, drawing upon findings from current research to meet the diverse needs of learners.</td>
<td>• Implement a learner-centered strategy in a collaborative teacher-led, collaborative, individualized and project-based instructional setting.</td>
<td></td>
</tr>
<tr>
<td>B. Use technology to support learner-centered strategies that address the diverse needs of children.</td>
<td>• Plan and teach student-centered</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Chapter 5

General Preparation
Self Assessment

Page 97
Instructions: Select one level of agreement for each statement to indicate how you feel.  
SD = Strongly Disagree, D = Disagree, U = Undecided, A = Agree, SA = Strongly Agree

<table>
<thead>
<tr>
<th>Statement</th>
<th>SD</th>
<th>D</th>
<th>U</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have a strong understanding of the nature and operation of technology systems.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I am proficient in the use of common input and output devices; I can solve routine hardware and software problems; I can make informed choices about technology systems, resources, and services.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I can use technology tools and information resources to increase productivity, promote creativity, and facilitate academic learning.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I can use content-specific tools (e.g., software, simulation, environmental probes, graphing calculators, exploratory environments, Web tools) to support learning and research.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I can use technology resources to facilitate higher order and complex thinking skills, including problem solving, critical thinking, informed decision-making, knowledge construction, and creativity.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I can collaborate in constructing technology-enhanced models, preparing publications, and producing other creative works using productivity tools.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I can use technology to locate, evaluate, and collect information from a variety of sources.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I can use technology tools to process data and report results.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
### ISTE Survey of Technology Competence

<table>
<thead>
<tr>
<th>I competent . . .</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Agree/Disagree</th>
<th>Agree</th>
<th>Strong Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating a computer using a variety of software packages.</td>
<td>SD</td>
<td>D</td>
<td>N</td>
<td>A</td>
<td>S</td>
</tr>
<tr>
<td>Using terminology related to computers and technology appropriately in written and oral communications.</td>
<td>SD</td>
<td>D</td>
<td>N</td>
<td>A</td>
<td>S</td>
</tr>
<tr>
<td>Describing and implementing basic troubleshooting techniques for computers.</td>
<td>SD</td>
<td>D</td>
<td>N</td>
<td>A</td>
<td>S</td>
</tr>
<tr>
<td>Using devices such as scanners, digital cameras, and/or video cameras with computers and software.</td>
<td>SD</td>
<td>D</td>
<td>N</td>
<td>A</td>
<td>S</td>
</tr>
<tr>
<td>Using word processing applications.</td>
<td>SD</td>
<td>D</td>
<td>N</td>
<td>A</td>
<td>S</td>
</tr>
<tr>
<td>Using the internet for research (web-based information retrieval)</td>
<td>SD</td>
<td>D</td>
<td>N</td>
<td>A</td>
<td>S</td>
</tr>
<tr>
<td>Using computers for information management (databases).</td>
<td>SD</td>
<td>D</td>
<td>N</td>
<td>A</td>
<td>S</td>
</tr>
<tr>
<td>Using spreadsheet applications.</td>
<td>SD</td>
<td>D</td>
<td>N</td>
<td>A</td>
<td>S</td>
</tr>
<tr>
<td>Creating multimedia presentations.</td>
<td>SD</td>
<td>D</td>
<td>N</td>
<td>A</td>
<td>S</td>
</tr>
<tr>
<td>Using computers to enhance my teaching and learning.</td>
<td>SD</td>
<td>D</td>
<td>N</td>
<td>A</td>
<td>S</td>
</tr>
<tr>
<td>Using computers for planning and organizing activities.</td>
<td>SD</td>
<td>D</td>
<td>N</td>
<td>A</td>
<td>S</td>
</tr>
<tr>
<td>Using computers for on-line communication.</td>
<td>SD</td>
<td>D</td>
<td>N</td>
<td>A</td>
<td>S</td>
</tr>
</tbody>
</table>
Michigan Self Assessment TTI

<table>
<thead>
<tr>
<th>ITEMS</th>
<th>Rating</th>
<th>Correlation - NETS Standard</th>
<th>Profile</th>
</tr>
</thead>
<tbody>
<tr>
<td>I Can...</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I. Technology Operations and Concepts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Create a newsletter with graphics and text in columns using a word processor.</td>
<td></td>
<td>NETS-T IA</td>
<td>Gen Prep 6</td>
</tr>
<tr>
<td>2. Create charts and graphs of numerical data using a spreadsheet.</td>
<td></td>
<td>NETS-T IA</td>
<td>Gen Prep 3,5,8</td>
</tr>
<tr>
<td>3. Calculate students’ grades using a spreadsheet.</td>
<td></td>
<td>NETS-T IA</td>
<td>Gen Prep 3,8</td>
</tr>
<tr>
<td>4. Search the World Wide Web for information to make choices of hardware and software.</td>
<td></td>
<td>NETS-T IA</td>
<td>Gen Prep 2,7,12</td>
</tr>
<tr>
<td>5. Create my own World Wide Web pages to be accessed by my students as part of a lesson.</td>
<td></td>
<td>NETS-T IA</td>
<td>Gen Prep 13</td>
</tr>
<tr>
<td>6. Use presentation software such as PowerPoint or HyperStudio to create a multimedia presentation.</td>
<td></td>
<td>NETS-T IA</td>
<td>Gen Prep 11</td>
</tr>
<tr>
<td>7. Capture images using a digital camera or scanner and transfer them to a computer.</td>
<td></td>
<td>NETS-T IA</td>
<td>Gen Prep 2</td>
</tr>
<tr>
<td>8. Apply basic troubleshooting strategies with a computer that is not working properly.</td>
<td></td>
<td>NETS-T IA</td>
<td>Gen Prep 1,2</td>
</tr>
<tr>
<td>9. Save and access files on your school’s network from your classroom.</td>
<td></td>
<td>NETS-T IA</td>
<td>Gen Prep 1,2</td>
</tr>
<tr>
<td>II. Planning and designing learning environments and experiences</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Design a lesson in which students search</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SCALE
1-Not at all
2-Minimally
3-Confidently
4-Able to teach others
ASU-West
Technology Show Case Lesson
Chapter 6

ASU-West Technology Show Case Lesson

Just a Snapshot of the entire document….

<table>
<thead>
<tr>
<th>Segment</th>
<th>Time</th>
<th>E S :</th>
</tr>
</thead>
<tbody>
<tr>
<td>s organization</td>
<td>MARK ALL THAT APPLY</td>
<td></td>
</tr>
<tr>
<td>individual students working alone</td>
<td>1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1</td>
<td>How are students NETS*T III B; III D</td>
</tr>
<tr>
<td>2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>her role</th>
<th>MARK ALL THAT APPLY</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(telling, lecturing) whole group</td>
<td>1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1</td>
<td>NOTES: What is the teacher NETS*T III B;</td>
</tr>
<tr>
<td>2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Chapter 7

Suggested Portfolio Evidence
### Suggested Portfolio Evidence

<table>
<thead>
<tr>
<th>Portfolio Tasks</th>
<th>NETS Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom Technology Application Plan and Philosophy Statement</td>
<td>1   2   3   4   5   6</td>
</tr>
<tr>
<td>Technology in Teaching Unit/ Lesson Plans with Video Clip</td>
<td>1   2   3   4   5   6</td>
</tr>
<tr>
<td>Technology in Communications</td>
<td>1   2   3   4   5   6</td>
</tr>
<tr>
<td>Technology in Record keeping</td>
<td>1   2   3   4   5   6</td>
</tr>
<tr>
<td>Technology Professional Development Plan</td>
<td>1   2   3   4   5   6</td>
</tr>
</tbody>
</table>
Chapter 7

Artifact detailed rubric and distilled rubric

Pages 137 and 142
Portfolio Development Progression - From Pre-Service to Advanced Certification

1. Learning Portfolio [Formative]
2. Assessment Portfolio [Summative]
3. Employment Portfolio

Advanced Certification Portfolio [Summative]
Professional Development Portfolio [Formative]
First-Year Teaching
Student Teaching/Internship
Initial Certification
Candidate Readiness
Experienced Teacher
Advanced Professional Proficiency

Technology Operations & Concepts
Planning & Designing Learning Environments & Experiences
Teaching, Learning, & Curriculum
Assessment & Evaluation
Productivity & Professional Practice
Social, Ethical, Legal, & Human Issues

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Chapter 8

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PORTFOLIOS
Suggested evidence by standard
Chapter 8

Page 168

METARUBRIC
Holistic look at meeting the ISTE NETS for Teachers
School Site Facilitators and District Level Leaders
Appendices

STANDARDS
NETS*Students
NETS*Teachers
NETS*Administrators
All Done!

Just remember why we do this!
Thank you!

For more information go to [www.iste.org](http://www.iste.org) or contact us at

- M.G. (Peggy) Kelly - pkelly@csusm.edu
- Helen Barrett - hbarrett@iste.org