

SITE Conference - Orlando
March 9, 2001

**Performance-Based
Technology Assessment Of
Teachers**

Helen Barrett

University of Alaska Anchorage
Member of Leadership Team, NETS for Teachers

Preparing Tomorrow's Teachers to Use Technology



U.S. Department of Education funding initiative

National Educational Technology Standards (NETS)

January 13, 2000 - Orlando, FL

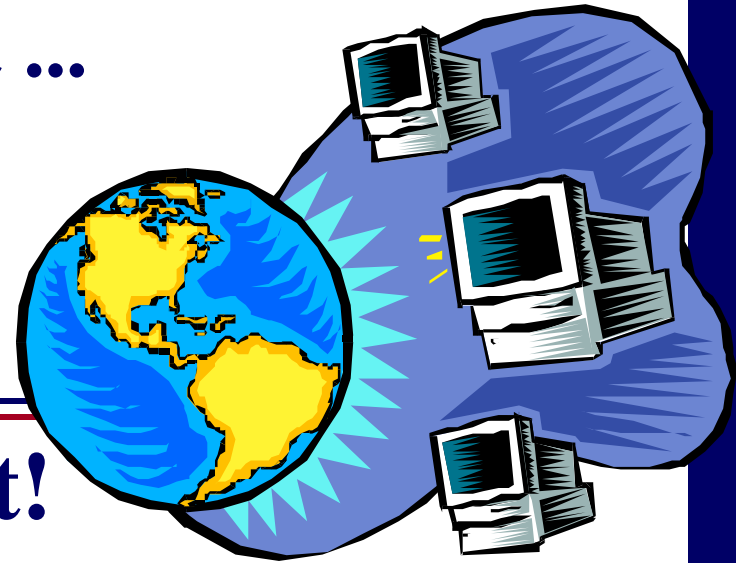


Ready or Not . . .

The World is Different

- Work is different ...
- Tools are different ...
- Communication is different ...
- Information is different ...
- Kids are different ...

And **Learning** Is Different!



Our Educational System Must Produce Technology-Capable Kids

Within a sound educational system students can become:

- **Capable information technology users**
- **Information seekers, analyzers, and evaluators**
- **Problem-solvers and decision-makers**
- **Creative and effective users of productivity tools**
- **Communicators, collaborators, publishers, and producers**
- **Informed, responsible, and contributing citizens**



National
Educational
Technology
Standards
Project



U.S. Department of Education funded project



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PT³ Grant Partners

- **Apple, Inc.**
- **California State University San Marcos**
- **Intel Corporation**
- **Milken Exchange on Education Technology**
- **NASA Classroom of the Future**
- **NCATE**



U.S. Department of Education funded initiative



PT³ Contributors

- **Classroom Connect**
- **Knowvation**
- **The Learning Company**
- **Semiconductor Industry Association**
- **Microsoft Corporation**
- **Public Broadcasting Stations**
- **T.H.E. Institute**



U.S. Department of Education funded initiative



NETS Project Partners

- **AFT** American Federation of Teachers
 - **ALA** Association of School Librarians, Amer. Library Assoc.
 - **ASCD** Association of Supervision and Curriculum Development
 - **CCSSO** Council of Chief State School Officers
 - **CEC** Council for Exceptional Children
 - **NAESP** National Association of Elementary School Principals
 - **NASSP** National Association of Secondary School Principals
 - **NEA** National Education Association
 - **NSBA** National School Boards Association's ITTE: Education Technology Programs
 - **NFIE** National Foundation for the Improvement of Education
 - **SIIA** Software & Information Industry Association
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CURRICULUM ORGANIZATIONS



- **ACTFL American Council on Teaching of Foreign Languages**
- **IRA International Reading Association**
- **NCSS National Council for the Social Studies**
- **NCTM National Council of Teachers of Mathematics**
- **NCTE National Council for the Teachers of English**
- **NSTA National Science Teachers Association**

Establishing New Learning Environments

Traditional ----- Incorporating ----- New Environments
New Strategies

Teacher-centered instruction —————> **Learner-centered environments**
Single sense stimulation —————> **Multisensory stimulation**
Single path progression —————> **Multipath progression**
Single media —————> **Multimedia**
Isolated work —————> **Collaborative work**
Information delivery —————> **Information exchange**
Passive learning —————> **Active/exploratory/inquiry-based learning**
Factual/literal thinking —————> **Critical thinking, informed decision-making**
Reactive response —————> **Proactive/planned action**
Isolated, artificial context —————> **Authentic, real world context**

Phase I. NETS for Students



**Released
NECC '98**

**URL:
<http://cnets.iste.org>**

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Phase II. Connecting Curriculum and Technology



Released

Nov. 1999

On Web at:

<http://cnets.iste.org>



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Phase III. Support Standards



Standards for:

- Teachers
- Administrators
- Infrastructure
- Resources
- Policy

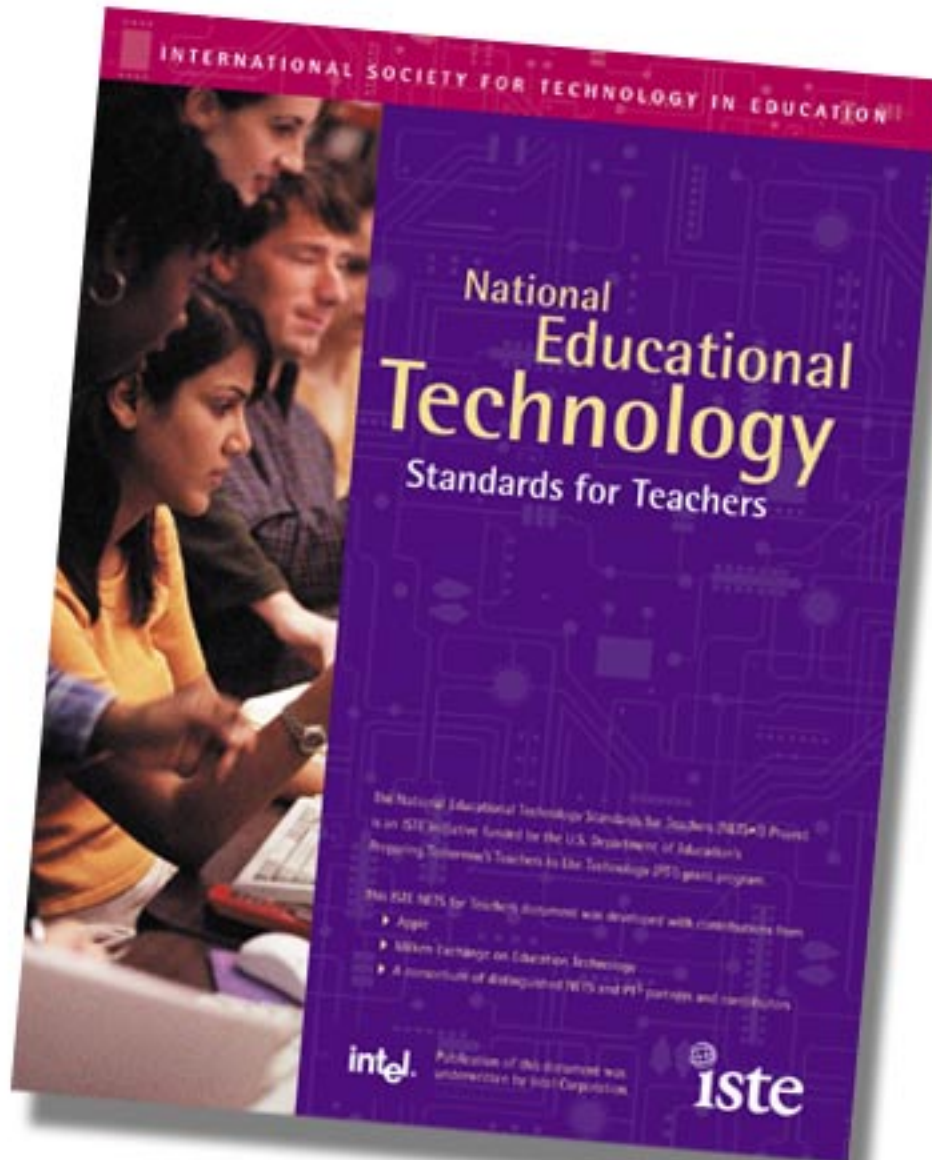


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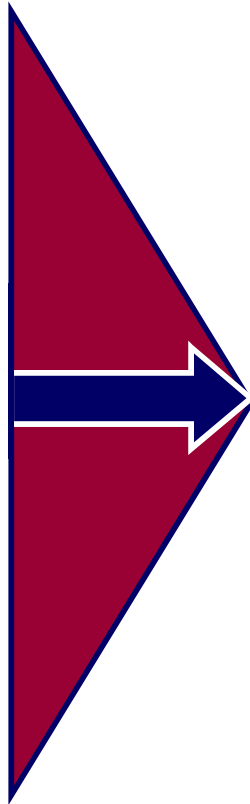
NETS for Teachers Released June, 2000

Web:

<http://cnets.iste.org>



Standards Categories



- 1. Technology Operations and Concepts**
- 2. Planning and Designing Learning Environments and Experiences**
- 3. Teaching, Learning, and the Curriculum**
- 4. Assessment and Evaluation**
- 5. Productivity and Professional Practice**
- 6. Social, Ethical, Legal, and Human Issues**



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Performance Profiles

1. General Preparation Profile: introductory skills, knowledge, and attitudes
2. Professional Preparation Profile: integration of technology and curriculum
3. Student Teaching/Internship Profile: application of technology in student teaching/internships with students
4. First Year Teaching Profile: responsibility for use of technology to support teaching, learning, communications, management, and professional productivity in their classroom



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National Educational Technology Standards for Teachers

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International Society for Technology in Education

Essential Conditions for Implementing NETS for Teachers

Category	Condition
Leadership	1. Vision and Mission: A clear vision and mission statement that includes the use of technology in education.
	2. Supportive Policies: Policies that encourage the use of technology in the classroom.
	3. Professional Development: Opportunities for teachers to learn and grow through professional development.
	4. Collaboration: Opportunities for teachers to collaborate and share resources.
Infrastructure	1. Access: Reliable and secure access to technology resources.
	2. Quality: High-quality technology resources that are relevant and engaging.
	3. Support: Technical support and training for teachers and students.
	4. Security: Measures to protect data and ensure privacy.
Professional Development	1. Ongoing: Continuous learning opportunities for teachers.
	2. Relevant: Professional development that is directly related to classroom practice.
	3. Collaborative: Opportunities for teachers to learn from each other.
	4. Personalized: Professional development that meets the needs of individual teachers.
Classroom Environment	1. Safe: A safe and secure learning environment.
	2. Engaging: A learning environment that is engaging and motivating.
	3. Supportive: A learning environment that provides support and encouragement.
	4. Collaborative: A learning environment that encourages collaboration and teamwork.

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- ISTE Network**
 - 1. Connect with other educators.
 - 2. Share resources and ideas.
 - 3. Collaborate on projects.
 - 4. Stay up-to-date on the latest in education technology.
- ISTE Expertise**
 - 1. Gain expertise in various areas of education technology.
 - 2. Share your expertise with others.
 - 3. Stay up-to-date on the latest in education technology.
- ISTE Project Partners**
 - 1. Find partners for your projects.
 - 2. Collaborate on projects.
 - 3. Share resources and ideas.
- ISTE Quality**
 - 1. Ensure the quality of your work.
 - 2. Share your work with others.
 - 3. Stay up-to-date on the latest in education technology.



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Essential Conditions for Successful Technology Use

There are fundamental requirements that must be met for teacher candidates to learn to use technology effectively.

- **Visionary planning with support and proactive leadership from the education system**
- **Educators skilled in facilitating the use of technology for teaching, learning, management, communications, and productivity**
- **Assessment of effectiveness of technology for learning**
- **Access to contemporary technologies, software, and telecommunications networks**
- **Technical assistance/mentors for using and maintaining technology resources**
- **Rewards and incentive systems**

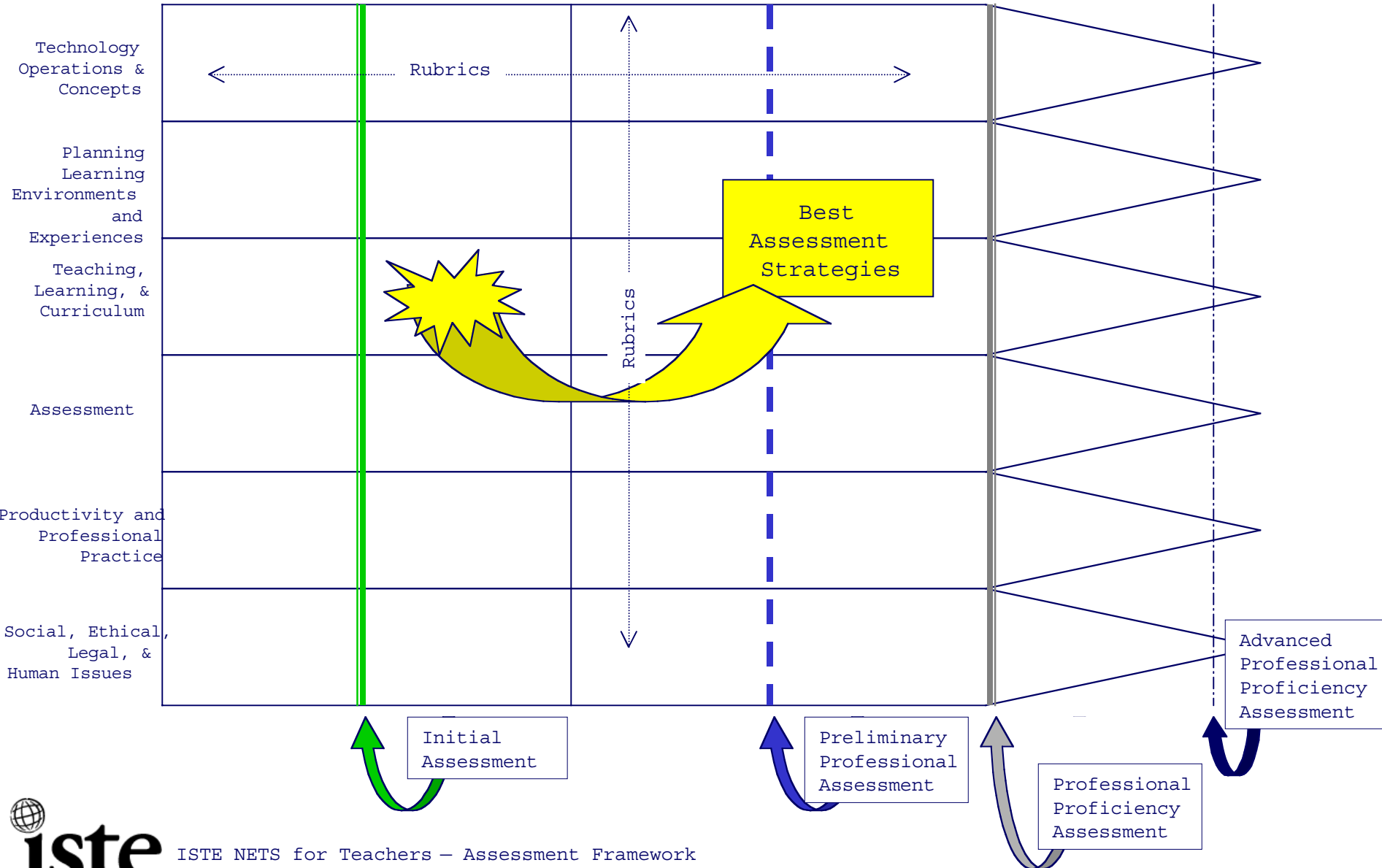
Phase IV. Standards for Evaluation and Assessment

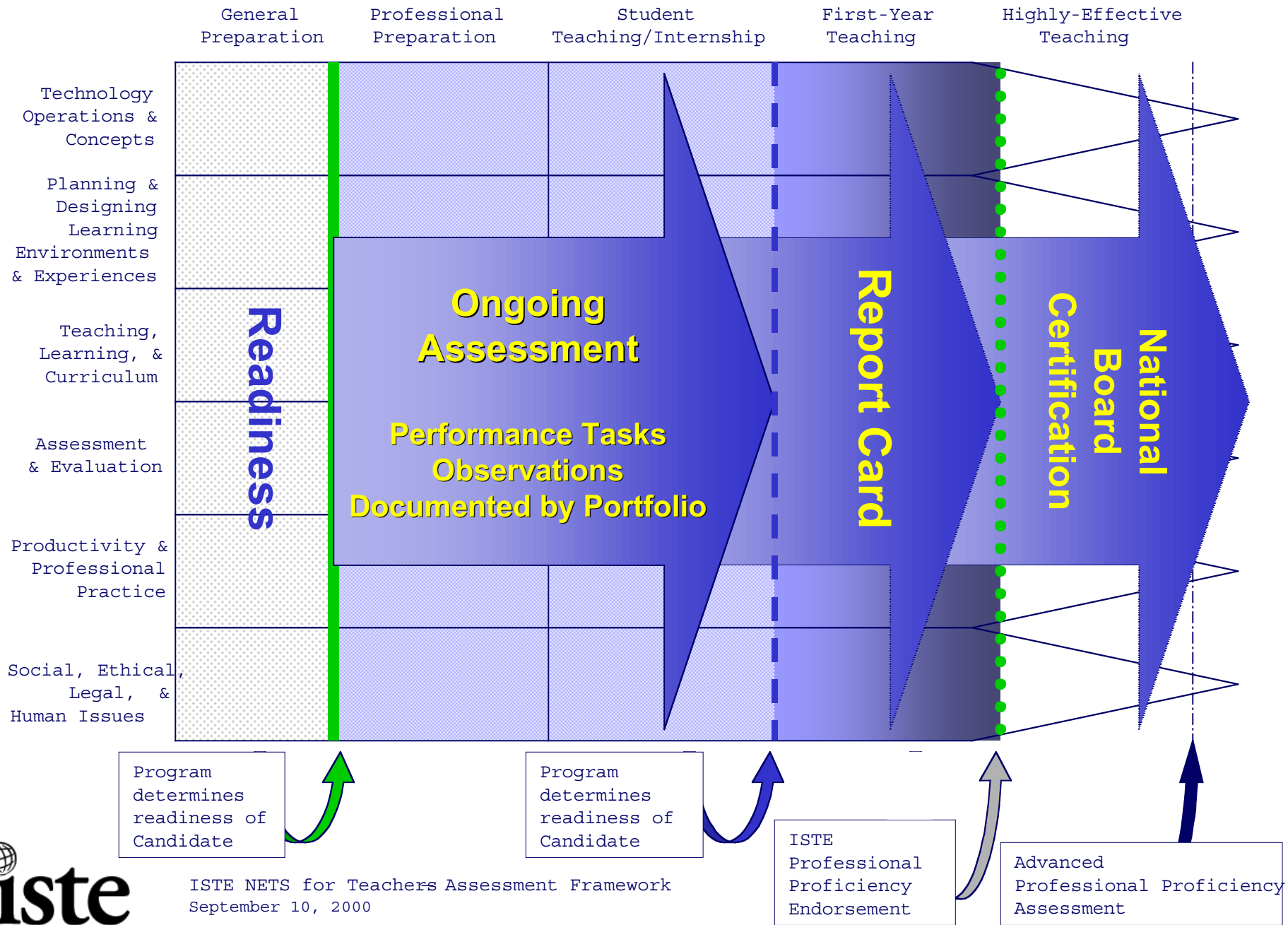
As the standards and performance indicators are developed:



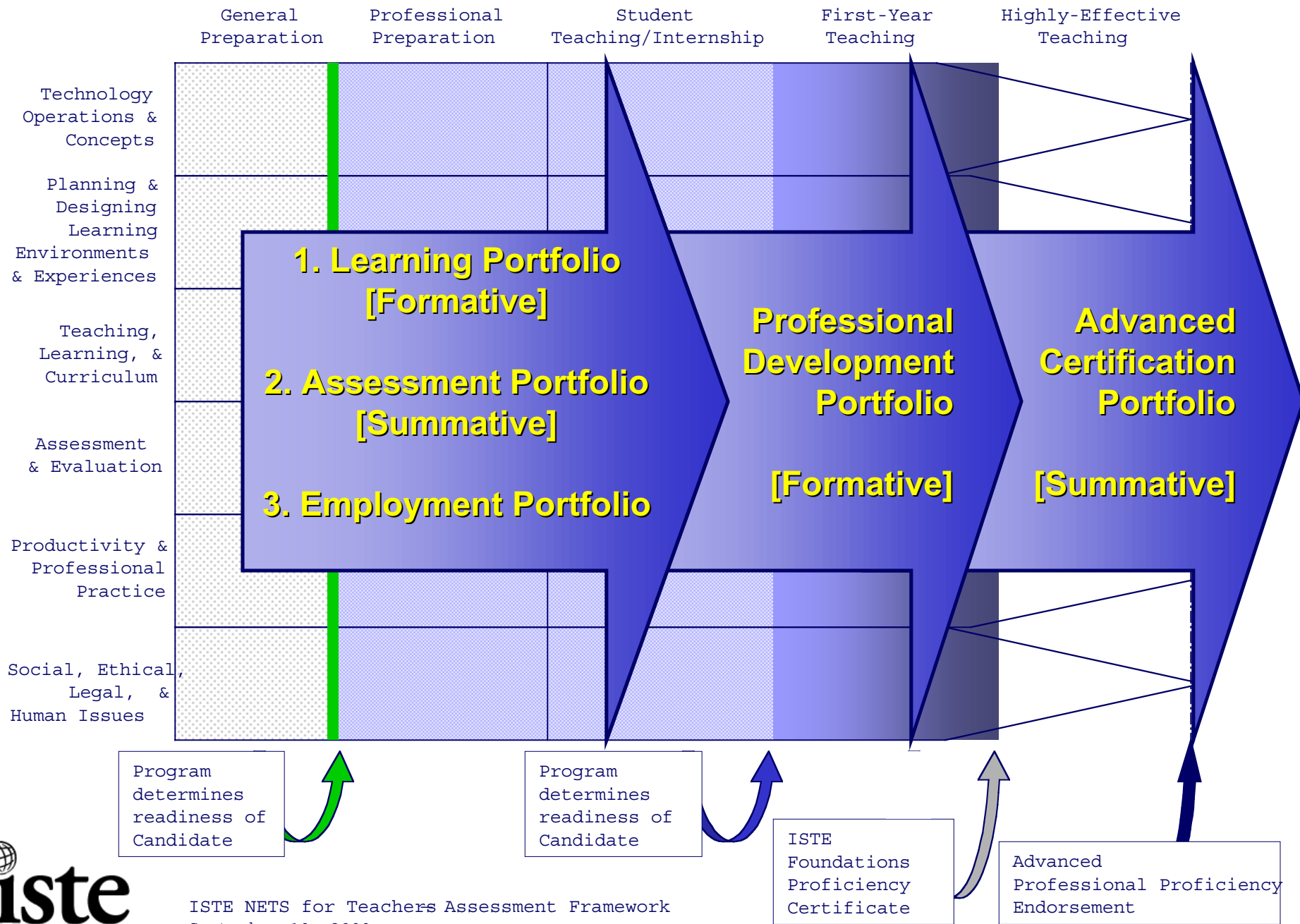
- performance assessments and the processes for applying them
- evaluation systems for assessing the effectiveness of technology use in classrooms, schools, and universities

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





Portfolio Development Progression - From Pre-Service to Advanced Certification



Products in Development . . .



1. Connecting Curriculum and Technology in Preservice Education

Wheeling writing team
August, 2000
To be released at NECC 2001

2. Evaluation and Assessment Systems

Tempe writing team
December, 2000

3. Administrator Standards

Redmond writing team
February, 2001



Assessment Writing Team

Five teams met in Tempe, December, 2000:

1. Assessments for lessons written in August writing team meeting
2. Criteria for “green line” assessment (1st Profile)
3. Performance Tasks and Rubrics to assess 2nd & 3rd Profiles
4. Portfolio Development Criteria for 2nd, 3rd, & 4th Profile and beyond...
5. Observational Assessment Strategies for 3rd & 4th Profiles



Supporting Technology Assessment and Teacher Education (STATE)

2001 Knowledge Development PT3 Catalyst Grant Proposal

Private Sector Partners:

Teacher Universe
Apple Computer
EDmin.com

University Partners:

University of Alaska Anchorage

Non-Profit Partners:

MC-Squared

DEVELOPMENT

OBJECTIVE 1 - Create an online Clearinghouse on Electronic Portfolio and Performance Assessment in Teacher Education to disseminate promising practices.

OBJECTIVE 2 - Develop and implement model assessments for entry into Teacher Education programs (at the end of the first NETS Profile). (TU)

OBJECTIVE 3 - Design relational database structure and specifications for a Learning and Assessment Management Program (LAMP) to link standards, evidence, artifacts, and assessments for replication in SOE's with traditional university campus information systems, such as Banner (Oracle) or SQL databases. (EDmin, Apple)

OBJECTIVE 4 - Development training and support materials will be developed and published through web site, videotapes, CD-ROM & DVD, and print materials. (ISTE)

OBJECTIVE 5 - Conduct at least one annual national Development Symposium on Using Technology to Support Assessment in Teacher Education in conjunction with a national or international technology conference such as SITE, ED-MEDIA or NECC.

DISSEMINATION

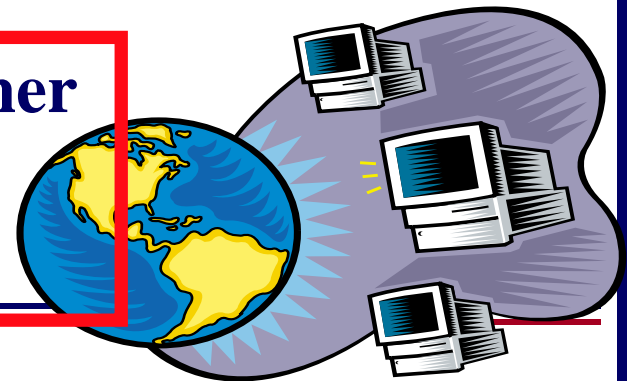
OBJECTIVE 6 - Provide presentations or workshops on Technology and Assessment at mainstream (non-technology-focused) education conferences such as ATE, ASCD, NSBA, AERA and the h-ed strands of various curriculum organizations (NCTM, NCSS, IRA, ACTFL, NCTE, NSTA).

OBJECTIVE 7 - Develop strategies for scaling up and disseminating this information through training materials, workshops, and academies for application of best practices and implementation at the local level.

- Workshops for faculty on developing their own e-portfolios
- Summer Institutes (cruise to Alaska!)

NETS STANDARDS CAN HELP EDUCATORS KNOW:

- **WHAT** technology skills should be woven into the curricular fabric of our schools . . .
- **WHEN** such skills should be taught . . .
- **HOW** technology can support the new learning environments . . .
- **HOW** we will know when the learner has achieved the educational standards established.



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