

Session Focal Points
Online Assessments
PASI 2006, McKimmon Center, Raleigh, NC, July 31 – August 3
Presenters: Scott Ragsdale, Randy Craven

Session Purpose

Cover information on online assessments currently implemented and scheduled for future implementation in North Carolina.

Topics include:

- North Carolina Online Test of Computer Skills
- North Carolina EOC Physics Online Assessment
- North Carolina EOC Online Assessments

North Carolina Online Test of Computer Skills

First Semester 2005 [Fall]

- Operational Pilot administration
- October 17, 2005 – January 13, 2006
- Delayed Results
- 109,584 students tested
- Students completing administration = 99%
- Standard Setting: February 9-10, 2006
- State Board of Education (SBE) approved recommended passing score of 150 on March 2, 2006
- Results of Operational Pilot administration released on March 6, 2006

Second Semester 2006 [Spring]

- Operational administration
- March 20, 2006 – June 16, 2006
- Results reported bi-monthly beginning March 31, 2006
- 50,941 students tested
- Students completing administration = 99.87%
- Individual Student Reports and labels available for 2005-2006 school year on June 13, 2006

Summer Semester 2006

- Operational administration
- July 1, 2006 – July 28, 2006
- Available as an option for students in grades 8-12 who had not already met the computer skills graduation requirement
- NOT eligible to participate during this administration:
 - ✓ Students who were rising eighth-graders
 - ✓ Students who had previously participated, or were scheduled to participate, in a different Summer 2006 administration of computer skills [i.e., 1998 Curriculum Test Edition 2]
- Student registrations had to be assigned to the correct school for each student for the 2006-2007 school year
- Student information questions (SIQs) had to be completed before a student can be tested
- Students who were registered but did not have SIQ data completed would not show in the listing of names to choose from when beginning a test

The Future: 2006-2007 School Year

- Testing Calendar
 - ✓ First Semester 2006 [Fall]
 - October 2, 2006 – January 12, 2007
 - ✓ Second Semester 2007 [Spring]
 - March 12, 2007 – June 8, 2007
 - ✓ Summer Semester 2007
 - TBD
- NCDesk
 - ✓ New version to be released
 - ✓ Windows upgrade to JRE [Java Runtime Environment] 1.5.0_07
 - ✓ Integration of audio capability for read aloud accommodation
 - ✓ Justify option has been removed from NCEdit
 - ✓ Mac OS X 10.2 no longer supported for testing
 - NCDesk will no longer run on this version

- ✓ JAWS integration still in research and development phase
- SIQs must be filled out at least one day prior to testing [continuation from Summer Semester 2006]
 - ✓ If SIQs are not complete, the students will not appear in the testing application
- Once a student begins testing, SIQ can no longer be edited
- Tests must be started and completed on the same day unless student is registered as multiple test sessions
 - ✓ Forced completion of tests on a nightly basis

Test Information

Strand	Percent of Test Items
Societal/Ethical Issues	12-14%
Database	22-25%
Spreadsheet	22-25%
Keyboard Utilization/WP/DTP	18-20%
Multimedia/Presentation	10-12%
Telecommunications/Internet	10-12%

Resources

- <http://cskills.ncsu.edu/nccs>
Link to home page of the North Carolina Online Test of Computer Skills
- <http://ncdesk.ncsu.edu/ncdesk>
Direct link to the home page for the NCDesk application suite
- <http://cskills.ncsu.edu/ncdesk/technote/>
Direct link to the home page for the NCDesk technical notes
- <http://www.ncpublicschools.org/curriculum/computerskills>
Link to Computer/Technology Skills Standard Course of Study on the North Carolina Department of Public Instruction website
- <http://community.learnnc.org/dpi/tech>
Link to Computer/Technology Skills page for Curriculum and School Reform on the North Carolina Department of Public Instruction website
- <http://www.ncpublicschools.org/accountability/testing/computerskills>
Link to computer skills testing information on the North Carolina Department of Public Instruction website
- <http://tps.dpi.state.nc.us/>
Link to Technology Implementation & Planning Services page on the North Carolina Department of Public Instruction website
- <http://www.ncpublicschools.org/techservices>
Link to Technology Services page on the North Carolina Department of Public Instruction website

North Carolina EOC Physics Online Assessment

The Journey Begins

- Feasibility study conducted in Spring 2006
- Eligibility
 - ✓ At least one physics teacher from each school having a physics course during 05-06 school year
 - ✓ Optionally, any student who was enrolled in the course of physics either at school or through a virtual online course of physics in which the physics EOC was required
- Feedback
 - ✓ Survey

Feasibility Study Purpose

- Purpose of the Feasibility Study was to determine the feasibility of administering an online physics EOC test with virtual simulations to students who are enrolled in the course of physics in each public high school in North Carolina
- A major focus was on issues related to connectivity, access to computers at the school, browser and monitor capacity, students' ability to access the test comparably online, bandwidth capacity and other technological concerns
- The study also focused on hosting an online test at the high school level as well as other issues required to bring forth a physics online field test with simulations in the fall and spring of 2006-07

Feasibility Study Results

- Over 600 students/educators participated
- 157 surveys submitted
- Flash simulations worked more often than Java

- Some screen/layout issues with font sizes and symbols
- Some item issues (although this event was not intended as an item review)
- Early participants more likely to use with students and report more positive feedback
- Later participants more likely to have less planning and collaboration with local technical and testing staff
- Many participants (about 50%) reported not receiving preparation materials and/or had other communication issues

The New Technology

- Browser-based online assessment
 - ✓ Recent version of Internet Explorer or Firefox
- Web traffic
 - ✓ Allowed from data.ncsu.edu and cuacs8.mck.ncsu.edu [standard and secure]
- Pop-up windows
 - ✓ Allowed from data.ncsu.edu for full screen mode
- Cookies
 - ✓ Session state cookies allowed from data.ncsu.edu
- Flash
 - ✓ Version 7.0 or higher installed
 - ✓ To be used for simulations
 - ✓ To be used for calculators and other tools
- Java
 - ✓ Minimum Java version 1.4.2 installed with Web Start enabled
 - ✓ This requirement may be dropped for Fall 2006
- Java Network Launching Protocol [JNLP]
 - ✓ Client Computers need to support as part of Java Runtime Environment [JRE]
 - ✓ This requirement may be dropped for Fall 2006
- SVG [NEW]
 - ✓ Scalable Vector Graphics
 - ✓ This format may be used for Fall 2006 test questions
 - ✓ Smaller bandwidth footprint than graphic images
 - ✓ Other technical benefits (more accessible, etc.)
 - ✓ Some browsers support natively, others will require a helper application

The New Instrument

- Soft section breaks
 - ✓ Navigation throughout entire test
 - ✓ End of test page
- Virtual Simulations
 - ✓ Flash simulations
 - ✓ Simulations will show in same window as multiple-choice test questions – students will not toggle between any other windows.
 - ✓ Simulations will have imperative statements and require interactivity in order to complete a task correctly.

The Future: 2006-2007 School Year

- Test environment still in development
- Use NCRegistration for...
 - ✓ Registration of all Physics students
 - ✓ Required SIQ entry (at least one day prior to testing)
 - ✓ Required scheduling (at least one day prior to testing)
 - ✓ Monitoring progress
- Field Testing during 2006-07 school year
 - ✓ Fall 2006 Testing
 - ✓ Spring 2007 Testing
 - ✓ No results reported

The Future: Beyond the 2006-2007 School Year

- Scheduled to become operational for 2007-2008 school year
- EOC Physics Online assessment is NOT optional
 - ✓ required format for this assessment
 - ✓ no dual system of testing [online vs. traditional paper/pencil]
 - ✓ Students with accessibility issues will likely have to be put on the NCCLAS

Resources

- <http://cuacs8.mck.ncsu.edu/physics/>
Link to home page of the North Carolina EOC Physics Online Assessment
- <http://www.colorado.edu/physics/phet/web-pages/index.html>
Link to University of Colorado Physics Education Technology home page
- <http://www.ncpublicschools.org/curriculum/science/scos/>
Link to Science Standard Course of Study on the North Carolina Department of Public Instruction website
- <http://www.ncpublicschools.org/curriculum/science/scos/2004/27physics>
Direct link to the Physics Standard Course of Study on the North Carolina Department of Public Instruction website

North Carolina EOC Online Assessments

The Future: 2006-2007 School Year

- Optional
 - ✓ Dual testing system
 - ✓ Entire School+Subject must either use all online or all paper-pencil
 - ✓ DO NOT elect to test online unless you are confident that there will be no logistical and technical problems
 - ✓ Sufficient traditional materials printed for all students statewide
- When?
 - ✓ 3 week window at end of course for student
 - ✓ ~ 6 week window that will be open for sessions to be scheduled for fall and spring
- Browser-based online assessments
 - ✓ Recent version of Internet Explorer or Firefox will be required
- Test environment and format will mimic EOC Physics Online Assessment
 - ✓ Some adjustments
 - ✓ No simulations for other EOC subjects during the 2006-2007 school year
- NCRegistration managed
 - ✓ Registration of Students
 - ✓ SIQ completions
 - ✓ Schedule Test Sessions
 - ✓ Monitor Progress
- Registrations, SIQs, and scheduling are required to be completed at least one day prior to testing
- Assessment must be completed on the same day
 - ✓ Exceptions:
 - Multiple Testing Sessions accommodation captured in SIQ
 - Technical problems before or during testing that prevent student(s) from beginning or completing administration
- Possibility of a lottery for number of students and/or session slots – a per subject per day quantity will likely have to be established in order to keep the test servers responsive to students and administrators during testing
- Current limit of 4,500 EOCs per day proposed (1,500 per starting session window)
- Within the same window as the North Carolina Online Test of Computer Skills

General

Additional Resources

- <http://www.21stcenturyskills.org/>
Link to Partnership for 21st Century Skills website
- <http://tps.dpi.state.nc.us/tech/PASITech.ppt>
Direct link to PowerPoint on Technical Issues and Requirements for Online Testing presented by Benny Hendrix during PASI 2005

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