

## Session Focal Points

Online Testing Initiatives in North Carolina

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<http://cskills.ncsu.edu/nccs/presentations/>

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### Session Purpose

As North Carolina students prepare for the 21st century, the state's accountability program is also looking to the future for new ways of assessing student achievement. This session will explore online testing and the use of authentic or performance tasks to assess student skills and knowledge. Specific topics include: Online Test of Computer Skills, Online End of Course Test of Physics, optional online EOC testing, procedural changes such as pre-registering using NCRegistration.

## General

### What Initiatives?

- Online Test of Computer Skills
- End-of-Course Online Physics Field Test
- End-of-Course Tests (optional 06-07)
- Writing Online Special Study
- Online formative assessments (i.e., ClassScape)
- Other online resourced assessments
  - ✓ **NCEXTEND1**
  - ✓ NCCLAS
- Other web applications supporting test development/maintenance:
  - ✓ Online Item Writing System
  - ✓ Experimental Section Review (ESR)

### Elements of Online Assessments

- More interactive
- Navigation features – Section breaks
- Test Simulations required to be available
- Opportunity for increased test administration standardization
- More data can be collected
- Opportunity to expand the use of innovative items
  - ✓ Virtual/performance based items
  - ✓ Short and/or extended response
- Quicker data processing and reporting
- Opportunity for improvements in data accuracy
- Reduction of materials management
- Students have a positive attitude for online testing
- Technology issues
  - ✓ Internet aware applications (NCDesk)
    - Java version
  - ✓ Browser based (EOC & Physics)
    - Session State Cookies
    - Javascript
    - Flashpaper / Interactive Flash Items / Flash player
    - Versions
- New management processes & systems
- Security
- Systems design
- Systems maturation rate & flexibility

### Performance Components

- Online Test of Computer Skills
  - ✓ 50% multiple choice (within an online interface)
  - ✓ 50% performance (within an online interface with simplified applications)

- Physics Online
  - ✓ Mostly multiple choice (within an online interface)
  - ✓ Small number of performance-based items using collections of variables
- EOC Online
  - ✓ All multiple-choice (within a online interface having item views that match paper-pencil tests)
- Online Writing Special Study
  - ✓ Single prompt with essay response

### Performance Scoring Models for Online Assessments

- Pattern matching – Student response compared to a pattern of expected valid response(s) to determine score
- Variable set analysis – Variables returned are analyzed against a set of valid values to determine score
- Writing
  - ✓ Automatic Mechanics analysis (spelling & grammar)
  - ✓ Artificial intelligence
  - ✓ Distributed human scoring

### Educator/Administrator Centric Applications

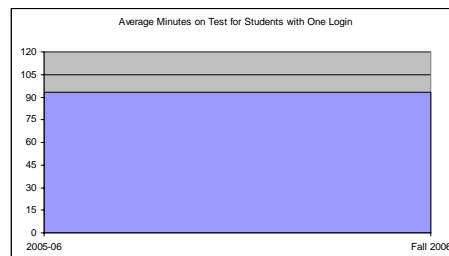
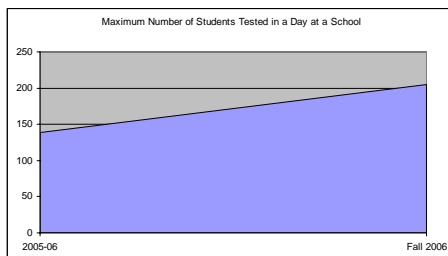
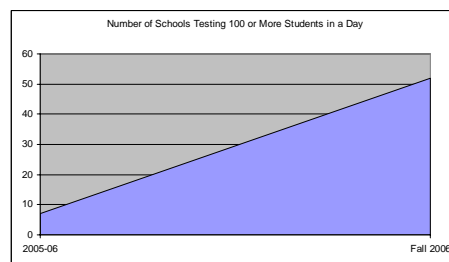
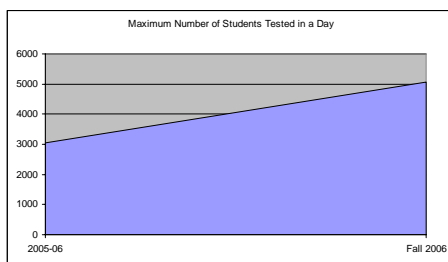
- Not directly accessed by students being administered these assessments
- NCCLAS
  - ✓ Data Collection
  - ✓ Special Study Data Collection
- **NCEXTEND1**
  - ✓ Assessment Management
  - ✓ Task Delivery
  - ✓ Assessment Delivery
  - ✓ Data Collection

## Online Test of Computer Skills

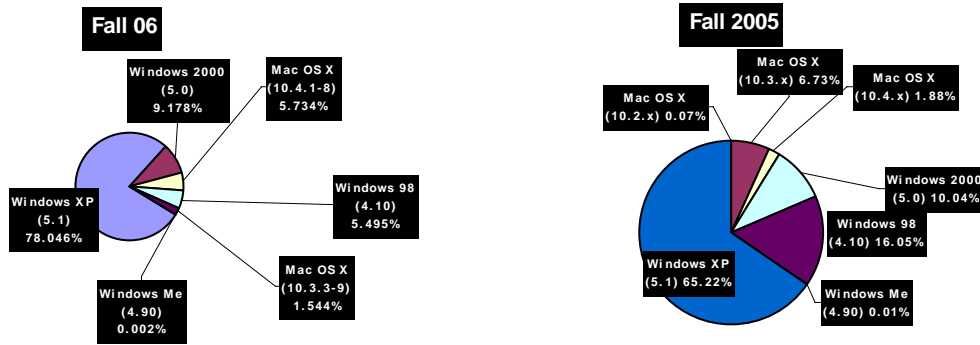
### Notable Preliminary/Unofficial Numbers from Fall 2006

- 205 students tested in one day at one school (for 05-06 this was 139)
- 52 schools tested 100 or more students in one day (for 05-06 this was 7)
- 5,068 maximum testing sessions used in a single day (for 05-06 this was 3,063)
- 23 days of testing in which volume of used sessions was 3,000 or more
- ~133,980 total students tested
- ~106,035 8th grade students tested
- ~2,228 different test administrators with 52 logging in 300 or more students
- ~3,446 students had the Computer Reads Aloud option

### Online Progress Indicators



## Platform Shifting



## Online Computer Skills Items for Spring 2007

- NCRRegistration SIQ Rollover available on 2/5/07
- NCRRegistration session scheduling open on 2/5/07
- After first week embargo for analysis, then scoring continues overnight with reporting next day
- Window 3/12 – 6/8
- LIR (last in reported) Student Results - NCRRegistration ISR and Labels output not additive – new testing results in the same subject (computer skills) replace results from earlier window (fall).
- NCRRegistration CSV Score Report = current window activity only
- JAWS compatibility not tested/approved – also newer versions of JAWS released since last tested

## NCDesk – Moving Forward

- Adjustments for accommodating delivery of Writing assessments online
  - ✓ Assessment selection on login page
  - ✓ Programmatically remove spell check functions
  - ✓ Programmatically remove image insertion functions
  - ✓ Other features deemed necessary
- Additional features for testing audio functionality
- Additional features for viewing correct responses for the Test Simulation possible

## EOC (Physics & EOC)

### EOC Physics Field Test

- Fall 2006
  - ✓ 3,733 Students Tested
  - ✓ New blocking added for incorrect Flash versions
- Spring 2007
  - ✓ Registration and Scheduling now available
  - ✓ No Reports (Field Test)

### EOC Online Physics – Moving Forward (Next Year)

- Interim standards will be set on the fall 2007 operational test data.
- In the fall block (2007), scores will be delayed.
- The recommended Interim Standards will go to the State Board for approval in February 2008.
- In spring 2008, scoring will be reasonably immediate after QC checks are complete, and students will be held to the INTERIM standard.
- After an entire year is completed (2007-08), additional standard setting methodologies will be employed to confirm or shift the interim standards.
- In fall 2008, the final standards will be approved by the board and in place for students who take the EOC in 2008-09 and beyond until we change things again.

### EOC Online (Optional)

- Fall 2006
  - ✓ First time EOCs offered online as an option
  - ✓ One school participated in Algebra I
    - No problems reported
    - Students “enjoyed” it

- Spring 2007
  - ✓ Registration & Scheduling now available
- Not included:
  - ✓ Chemistry Field Test
  - ✓ Physical Science Field Test
  - ✓ Biology Field Test

### EOC Online (Optional) – *Next Steps*

- Scoring for Online EOC Total Multiple-Choice Tests that have established standards set by the SBE
  - ✓ Once data are certified, then results will be immediately available to LEA Test Coordinators upon student completion of the test via the NCRegistration system.
  - ✓ Early testers will have a slight delay (week?)
- Add ISRs & Label output to NCRegistration for EOCs

### EOC Online (Optional) – *Moving Forward (Next Year)*

- Making the answer choices clickable
- Improvement of the calculator
  - ✓ Moveable/draggable on screen (within test interface)
  - ✓ Add graphing capability
- Improvement of online reference content
  - ✓ Moveable/draggable on screen (within test interface)
- Attempt to improve item view state preservation
  - ✓ Position
  - ✓ Zoom percentage
- Optional to continue until such time as it is no longer feasible to maintain paper-and-pencil testing.

## NCEXTEND2

### Online 2007-2008

- Process under way to present all **NCEXTEND2** in an online format
- Format similar to EOC Online
- Format for Writing would be delivered using NCDesk with a single editor item.

## NCRegistration

### Next Steps

- Management features to be improved
- May begin work on tighter user account integration across many online projects (including TNN)
- Improvement of speed on SIQ entry, screen (ajax elements) performance, etc.
- Adding query/sort order control features to report output (ISR & Labels)
- A good percentage of sessions scheduled continue to be left unused – we are looking into ways of reducing this and may seed the “Maximum Concurrent Students Testing” in the School Profiles with values from data collected from Computer Skills to limit the number of students that can be scheduled for a start time window.
- Report output enhancements
  - ✓ Control by query report output results
  - ✓ Possibly adding different output formats (XML/SIF, others)

## Contact Information

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