



**Roger D. Breed, Ed.D., Commissioner**  
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To:    Dr. Roger Breed, Commissioner of Education  
From:    Dr. Pat Roschewski, Director of Statewide Assessment  
Re:    Proposal for Online Testing Requirements in 2012-2013

The Nebraska State Accountability (NeSA) tests have been administered in both paper/pencil and online testing modes for two years in reading, one year in mathematics, and science in 2012. The NDE has offered school districts the opportunity to select – by building – the testing mode for their students: paper/pencil or online.

The vast majority of students have been tested online (80+% in reading and in the science field test in 2011), but the 2011 mathematics online participation dropped to under 60%, costing the NDE an additional sum - \$56,000 – to order additional paper/pencil test booklets.

The NDE initiated a mode comparability study with the mathematics test results in 2011 to determine whether or not there were score differences in the results of paper/pencil test takers and the performance scores of students who were tested online. Attached is a copy of the numbers of students by grade and subgroup who were tested in both modes. On average 25% of the paper/pencil test takers were students with disabilities or students learning the English language, ranging from a high of 32% in grades 3-4 to a low of 20% and 16% in grades 8 and 11, respectively.

The results of the study shown in the table below indicates a significant positive difference in the scores for online test takers. The positive “effect” favors the online mode. Only one grade – grade 4 - indicates an advantage in score with paper/pencil testing, and that is very small. Six of the seven grades clearly show a score advantage to online test takers.

## Fixed Effect of Student's Test Administration Mode

| Grade            | Mode Effect<br>Online = 1; Paper = 0 | Standard Error | t-value |
|------------------|--------------------------------------|----------------|---------|
| 3 <sup>rd</sup>  | 2.88947                              | 0.87731        | **3.3   |
| 4 <sup>th</sup>  | -0.16067                             | 0.92843        | -0.2    |
| 5 <sup>th</sup>  | 0.29912                              | 0.99014        | 0.3     |
| 6 <sup>th</sup>  | 0.05490                              | 1.16110        | 0.0     |
| 7 <sup>th</sup>  | 2.99596                              | 1.19220        | *2.5    |
| 8 <sup>th</sup>  | 4.77773                              | 1.15051        | ***4.2  |
| 11 <sup>th</sup> | 5.11788                              | 1.25762        | ***4.1  |

\*p < .05 \*\*p < .01 \*\*\*p < .001

The score difference was enough that when the results of the comparability report were presented to the Governor-appointed Technical Advisory Committee, consisting of national experts, they recommended a policy change with regard to voluntary online testing. One of the TAC members was quoted as saying, "If Nebraska wants to standardize the testing process, it should standardize the mode of testing as well."

There will always be the need for some students to be tested in the paper/pencil mode, but in fairness to our students and school districts, it would seem appropriate to limit the paper/pencil test takers to only those students who have an Individual Educational Plan (IEP) that would require paper/pencil testing as an accommodation.

This proposed policy change would not apply to the small percentage of students taking the alternate test (less than 1% of the tested population) who are administered the NeSA-Alternate tests. The NeSA-Alternate Tests are administered one-on-one with teachers in the paper/pencil mode and answers are recorded by the teacher, not the student. This policy change is proposed only for the NeSA-General test takers in reading, mathematics, and science.

There are several advantages to shifting the policy from voluntary testing mode selection to required online testing (except for students with IEPs and the students who are administered the alternate tests) – in 2012-2013. Required online testing would:

- Standardize the testing process, resulting in higher scores.
- Provide a cost-effective move – online testing is less expensive than printing paper/pencil booklets.
- Provide a consistent policy approach with NeSA-Writing in grades 8, 11 which requires online testing except for students with Individual Educational Plans

Although the majority of students are currently being tested online, there are still districts that are choosing the paper/pencil mode, particularly in mathematics. Waiting until the 2012-2013 for the implementation of this proposed policy change would allow districts time to prepare technologically to create readiness for the online testing mode.

**Table 1. Numbers of Students Taking Paper and Online Tests by Demographic Subgroup**

**NeSA MATHEMATICS RESULTS – Spring 2011**

| <b>Grade:</b>                           | <b>Grade 3</b> |        | <b>Grade 4</b> |        | <b>Grade 5</b> |        | <b>Grade 6</b> |        | <b>Grade 7</b> |        | <b>Grade 8</b> |        | <b>Grade 11</b> |        |
|---|----------------|--------|----------------|--------|----------------|--------|----------------|--------|----------------|--------|----------------|--------|-----------------|--------|
| <b>Demographic Subgroup</b>             | Paper          | Online | Paper           | Online |
| <b>Total</b>                            | 8720           | 13200  | 8518           | 13078  | 8465           | 12918  | 8991           | 11867  | 8586           | 12105  | 8500           | 12043  | 9686            | 11128  |
| <b>Female</b>                           | 4290           | 6526   | 4082           | 6571   | 4111           | 6617   | 4387           | 5807   | 4432           | 6219   | 4057           | 5958   | 4736            | 5464   |
| <b>Male</b>                             | 4430           | 6874   | 4436           | 6507   | 4354           | 6301   | 4604           | 6060   | 4154           | 5886   | 4443           | 6085   | 4950            | 5464   |
| <b>American Indian / Alaskan Native</b> | 134            | 181    | 164            | 176    | 131            | 192    | 141            | 150    | 116            | 137    | 131            | 148    | 154             | 146    |
| <b>Asian</b>                            | 216            | 225    | 238            | 221    | 199            | 209    | 235            | 202    | 186            | 203    | 196            | 213    | 234             | 188    |
| <b>Hawaiian /Pacific Islander</b>       | 9              | 21     | 10             | 18     | 7              | 11     | 9              | 15     | 10             | 13     | 13             | 10     | 13              | 18     |
| <b>White, Not Hispanic</b>              | 5643           | 9550   | 5489           | 9542   | 5582           | 9441   | 6201           | 8629   | 6027           | 8929   | 5932           | 8866   | 6748            | 8865   |
| <b>Black, Not Hispanic</b>              | 576            | 828    | 608            | 861    | 612            | 828    | 538            | 790    | 540            | 782    | 491            | 778    | 701             | 576    |
| <b>Hispanic</b>                         | 1794           | 2052   | 1697           | 1924   | 1618           | 1908   | 1542           | 1768   | 1412           | 1783   | 1440           | 1726   | 1518            | 1107   |
| <b>Two or More Races</b>                | 348            | 343    | 312            | 336    | 315            | 328    | 325            | 313    | 294            | 258    | 297            | 302    | 318             | 231    |
| <b>Free/Reduced Lunch</b>               | 4548           | 5899   | 4151           | 7374   | 4189           | 5597   | 4366           | 5014   | 4049           | 5059   | 3843           | 4921   | 3806            | 3514   |
| <b>Special Education Students</b>       | 1722           | 2206   | 1734           | 2149   | 1703           | 2010   | 503            | 592    | 1577           | 1513   | 1360           | 1493   | 1285            | 1122   |
| <b>English Language Learners</b>        | 1061           | 945    | 1009           | 792    | 726            | 690    | 1702           | 1561   | 396            | 422    | 315            | 369    | 307             | 159    |