

# MCAS REPORTING ERROR

10-1-11

## 1. The reporting error

### (a) The type of the error

10<sup>th</sup> grade students received incorrect scale scores (the scores that run from 200 to 280) because they were taken from the wrong “raw score to scale score conversion table”

### (b) The cause of error

Based on an initial report from the contractor, Measured Progress, the use of the wrong conversion table was due to human error. The score reporting systems functioned properly, however, the staff person responsible for the selection of the conversion table used the wrong one.

### (c) The source of discovery

ESE’s Student Assessment Office received two calls that reported the error on Wednesday, 9-28-11 in the afternoon. One from the Principal of Westwood High School who reported that the reporting error had been brought to his attention by the parent of a student. The other call was made directly [REDACTED], who had compared the raw and scale scores [REDACTED] with the correct conversion chart that we post to our website.

## 2. The scoring contract

### (a) The history of the contractor, including history w/ MA

ESE’s current five year contract with Measured Progress (M.P.) for MCAS runs from January 1, 2010 to December 31, 2014. The FY 2011 contract was for \$25 million and will cost a similar amount this FY 2012. Overlapping with the MCAS contract, M.P. also won the contract for testing English Language Learners (“MEPA”) which runs from July 1, 2007 to June 30, 2012; this contract cost 3.5 million in FY 2011 and will incur similar costs in FY 2012. This will be the last year of the MEPA contract with M.P.; we are transitioning to a different test contractor, MetiTech, the testing contractor for the multi-state consortium WIDA, in FY 2013.

M.P. held the prior five year contract from July 1, 2004 to June 30, 2009, with a six month extension to December 31, 2009. Initially in this contract period, M.P. subcontracted the high school testing program to CTB / McGraw-Hill. Significant problems with the subcontractor's performance led to the termination of this subcontract in 2006 and the high school testing program was subsumed by M.P.

The previous MCAS contract was help by Harcourt which ran from 1999 to 2004.

(b) The terms of the contract

Measured Progress is contracted to:

- i. Develop approximately 3,500 high quality selected response (multiple choice) and constructed response (e.g., for essays, math problem solving, etc.) every year of the contract for English Language Arts (ELA), Mathematics, and Science. [NOTE: Approximately 50% of items are released to the public in grades 3-8 and 100% of high school items are released each year.]
- ii. Assemble, deliver, score and report results each year for the following tests:
  - ELA Reading Comprehension, grades 3 – 8 and 10 (Approximately 130 forms are administered in order to ensure high precision in equating results across years and to yield a bank of items for testing in the following year.)
  - ELA Composition, grades 4, 7 & 10 (approximately 56 forms)
  - Mathematics, grades 3 -8 & 10 (approximately 160 forms)
  - Science, grades 5 & 8 (approximately 44 forms)
  - Separate high school Biology, Chemistry, Physics and Technology/Engineering tests, grades 9 & 10 (approximately 36 forms)
  - NOTE: History/Social Science testing for grades 5 & 7, and US History in High School was suspended in 2009.
- iii. Ensure the highest technical quality of the tests (validity, reliability and comparability), equate results across forms and across testing years, and provide documented evidence of these characteristics.
- iv. The contract includes detailed specifications and timetables for all deliverables and penalties (“liquidated damages”) for when these specifications and/or timelines are not met.

3. Data quality assurance

(a) The contractor's responsibilities

M.P. is responsible for primary quality control for an extensive array of data generation, transport and processing steps in the testing process. We will summarize these responsibilities Monday.

M.P. is also responsible for a limited number of quality control redundant checks of the data. The genesis of the transition of this responsibility to M.P. is summarized in part “c” below. Under this area of responsibility, M.P. is responsible for the following:

- i. Validate the performance levels are consistent with the scaled cut scores.
- ii. Validate the performance levels are consistent with the theta cut scores
- iii. Recreate the scaled scores and achievement levels using the approved scaling constants and compare to psychometrics
- iv. Assign scaled scores and performance levels to students and compare to psychometrics.

(b) The state's responsibilities

ESE’s Student Assessment Office is responsible for the following data quality responsibilities:

- The accuracy of all student level data transmitted to the contractor
- Contact information related to all districts, schools, and other entities that administer MCAS tests; in this case, the contractor is responsible for redundant quality control (QC)
- Under the Department’s direction, a second independent MCAS equating is performed on all grades by faculty of the U.Mass Research and Evaluation Methods Program. This analysis confirms that the raw score to scaled score tables proposed by the contractor were correctly calculated. The Department reviews the two equating analyses and approves the final lookup tables.
- Stipulating the “business / reporting rules” that govern how all data is handled and reported.
- Provide districts with a “discrepancy reporting window” during a full week in August when school and district leaders are expected to review all MCAS data and report any discrepancies; the Department reviews all discrepancy reports while M.P. is responsible for investigating the discrepancies that involve checking source materials

ESE’s Student Assessment Office is responsible for the following quality control redundant checks:

- Every variable / “field” in the data files transmitted to ESE meet the data dictionary definition for that field

- Ensuring the accuracy of the list of students whose results must be invalidated due to security breaches
- Computing the growth data, performed on the raw data provided by the contractor
- Ensuring that the official data from the contractor is correctly transformed and loaded into the systems used to calculate AYP results and post them to the public website and to the secure reporting websites.

- (c) The ~~recent~~ contract change that ~~limited~~ shifted a limited number of quality control redundant checks from the state to the contractor 's role

In order to post ELA results before the close of school and to post preliminary Mathematics results in the first week of August, the Department had to reduce the time devoted to quality control redundant checks from one week to one day. The responsibility for producing the original reports of student results and then conducting the redundant quality control review was transferred from ESE's Student Assessment Office to the contractor. The contractor developed an independent protocol for this redundant review that was vetted and ultimately approved by the Student Assessment Office. [NOTE: Although the contractor has identified "human error" as the source of the scale score reporting problem, ESE has not yet been able to confirm that the contractor fully implemented the independent redundant review. This will be resolved in the coming days as we continue our investigation.]

[NOTE: In addition to the *data* quality control responsibilities summarized above, the Student Assessment Office and contractor conduct several dozen quality control procedures on all other stages of the MCAS testing program from item development, to item acceptance, to the assembly of test forms, to the production of test forms, to the delivery, administration and recovery of test booklets and answer sheets. A summary of these additional QC responsibilities will be prepared and transmitted on Monday.]

4. Steps taken by C.O.B. Friday September 30<sup>th</sup>
- (a) Multiple analyses completed to determine the full scope of the problem; confirmed it is limited to 10<sup>th</sup> grade mathematics
  - (b) Multiple analyses completed to determine impact of the corrections to student scale scores, re, MCAS and AYP reports at the district, school and individual student levels
  - (c) School districts and relevant associations informed with commitment to provide more detailed information next week; staff have already expedited transmittal of corrected student results at the request of some districts, e.g., Boston

- (d) Board members and legislative leadership informed just prior to public release
- (e) Public release coordinated with EOE and Governor's Office
- (f) Contractor provided initial analysis of the cause and scope of errors made in reporting scale scores
- (g) Contractor instructed to produce corrected reports for parents, schools and districts; data files completed on Friday and production scheduled to begin on Saturday and completed by Monday morning.
- (h) These steps are being conducted at the sole expense of the contractor and will be QC'd by Student Assessment staff once completed and prior to forwarding the corrected reports to parents, districts and schools; this is separate from any liquidated damages ("penalties") that may be assessed
- (i) Contractor directed to complete the investigation and documentation of all actions or lack thereof that contributed to the erroneous reporting of scaled scores and provide a detailed report to Commissioner Chester early next week.
- (j) Contractor informed that the Department is analyzing grounds for implementing the liquidated damages provisions of the contract.

5. Steps that will be taken and/or are being contemplated

- (a) Schools and districts will receive corrected MCAS and AYP data and reports next week and will forward corrected individual student MCAS reports to parents
- (b) Publicly facing web pages will be updated, e.g., "School and District Profiles"
- (c) ESE will complete its investigation, analyze the M.P. report, and determine appropriate corrective actions and consequences

6. Commissioner's current thoughts, including a recommended response from the Governor

*I haven't drafted this anticipating that you would do so; let me know if you would like me to develop a draft.*