



STATE OF MICHIGAN  
DEPARTMENT OF EDUCATION  
LANSING



JENNIFER M. GRANHOLM  
GOVERNOR

MICHAEL P. FLANAGAN  
SUPERINTENDENT OF  
PUBLIC INSTRUCTION

November 9, 2006

**REVISED**

**MEMORANDUM**

**TO:** State Board of Education

**FROM:** Michael P. Flanagan, Chairman

**SUBJECT:** REVISED Approval of Proposed Performance Standards for the Michigan Merit Examination (MME)

I am writing to revise the recommendations made to you earlier regarding the proposed cut scores on the MME that would identify students as "Exceeds Expectations," "Meets Expectations," "Basic," and "Apprentice."

In the earlier recommendations, four options for setting cut scores were presented:

1. Using cut scores equated (that is, made "equivalent") to the cut scores on the high school MEAP, if the MEAP were to be administered again this year.
2. Cut scores as recommended by a standard setting panel.
3. "Benchmark" scores identified by ACT as representing the ACT score most likely to allow a student to earn a "B" or better in college work in the subject area.
4. "Compromise" cut scores identified by department staff, representing an averaging of MEAP-equivalent and ACT Benchmark scores.

The recommendation at that time was to recommend State Board of Education approval of the "Compromise" set of cut scores. **I wish to revise that recommendation as follows:**

**It is recommended that the State Board of Education approve the performance standards labeled "MEAP Equated," as depicted in the charts attached to the memorandum dated October 30, 2006 to the State Board of Education (Attachment C), and to use these performance standards in reporting the Michigan Merit Examination results from Spring 2007.**

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## Rationale

1. The MME that will be administered this spring to all high school 11<sup>th</sup> graders is based on the high school subject area benchmarks from the 1995 *Michigan Curriculum Framework*. It does not test the new high school subject area content expectations approved by the state board of education this spring. In other words, this year's MME will be based on the same subject area content as the high school MEAP, had it been necessary to administer the MEAP for one more year. It makes better sense to recommend that the MEAP-equivalent cut scores be used to measure "passing."
2. Work is currently underway to revise the MME so that it is based on the new high school content expectations approved this spring by the state board of education. This spring's MME will contain some pilot test questions for this purpose. Once a revised MME is developed, a standard setting panel will need to be convened and a new set of cut scores developed for the revised MME. It makes sense that, until that time, cut scores be kept in place that are "equivalent" to the former high school MEAP. Doing so will have the additional benefit of not confusing local schools by changing cut scores this year, then changing them again in a year or two when revised MME assessments are administered.
3. As a state, we are headed into uncharted territory with the decision to administer the MME, with a college entrance exam at its core, to all 11<sup>th</sup> graders as our state assessment test. A recommendation on cut scores would be better informed once results are in hand from the first administration. In the meantime, it makes more sense to carry over from the MEAP "equivalent" cut scores that would keep the playing field level for students and schools, allowing the state board of education an opportunity to determine new cut scores once the results of the 2007 administration of the MME are available.



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MICHAEL P. FLANAGAN  
SUPERINTENDENT OF  
PUBLIC INSTRUCTION

TO: State Board of Education

FROM: Mike Flanagan

DATE: October 30, 2006

SUBJECT: **APPROVAL OF PROPOSED PERFORMANCE STANDARDS FOR THE MICHIGAN MERIT EXAMINATION (MME)**

The purpose of this State Board of Education item is to present the recommended performance standards for the new Michigan Merit Examination (MME). The procedures used to set the performance standards are described briefly later in this document. The procedures were carefully followed by the facilitators of the process, and were monitored by Office of Educational Assessment & Accountability (OEAA) staff to assure adherence to the plan. The recommendations resulting from the standard-setting activities are presented to the State Board of Education at this meeting since standard setting occurred August 2-4, 2006. The Michigan Technical Advisory Committee (comprised of nationally-recognized measurement and statistics experts), will review the procedures used and standard setting outcomes by the end of October, 2006. The results of that meeting will be presented at the November, 2006 State Board of Education meeting.

Performance standards are recommended on the MME for each subject other than Social Studies, including Reading, Writing, Mathematics, and Science. The recommended standards define the levels of performance for the statewide assessments used on the MME. These are *Level Apprentice*, *Basic*, *Met Michigan Standards*, and *Exceeded Michigan Standards*.

The standard setting activity was conducted based on data from the spring 2006 pilot administration of the MME involving over 5,000 Michigan high school students and 36 Michigan high schools. Standard setting panels were organized by subject (reading, writing, mathematics, and science), and consisted of between 15 and 17 panelists. The panelists were selected to represent the diversity of Michigan stakeholders, and included high school educators, high school counselors, high school principals, business representatives, college and university instructors of introductory freshman courses, and parents of Michigan high school students. The panelists worked under the direction of the contractors for MME and staff of the Department.

Each panel spent three days reviewing the assessment instrument(s) assigned to them, describing the achievement of students in each performance category, individually judging the level of performance that students would need to achieve for each of the four performance levels for each assessment, discussing these within their panel, and repeating this process up to three times, with additional performance information provided during each round. Panelists made their final judgments individually, and the resulting recommendations are a compilation of these individual judgments and MDE staff recommendations.

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MDE and contractor staff made the following three notable observations during the standard setting activities: (1) the panelists tended to lower their recommendations with each successive round of ratings, (2) the panelists recommended cut scores tended to be lower than the existing high school MEAP cut scores as translated onto the MME scale, and (3) panelist discussions tended to focus more on the adverse impacts on schools than is normal for a standard setting activity.

Because of these three observations and because two purposes of the new MME program are to increase student preparation for success in college and to increase the number of college graduates in Michigan, MDE staff felt that meeting Michigan standards on the MME should be a more rigorous challenge than on the high school MEAP rather than less of a challenge.

Therefore, MDE staff investigated different methods of setting higher standards while honoring the work performed by the panelists. MDE staff identified existing college readiness benchmarks published by ACT that can be easily translated onto the MME scale. The ACT college readiness benchmarks indicating a 50 percent probability of achieving a B or higher in a beginning freshman course were translated onto the MME scales. It was found that the ACT college readiness benchmarks were much higher than the panelist recommendations for the *met standards* cut scores. As a compromise, MDE staff propose the following: (1) approve the panelist recommended cut scores for the *basic* and *exceeded standards* categories, and (2) approve as the *met standards* cut score the average of the panelist recommendations and the MME scale translation of the ACT college readiness benchmarks.

The rationale for the proposed compromise is the following: The college readiness benchmarks, while desirable as *met standards* cut scores in the long run, are likely to be unreasonable in the short term because many students have not taken the more rigorous college preparatory high school courses that will be required for graduation in the future. However, as students begin to take those courses required by the Michigan Merit Curriculum, this situation should change so that more rigorous standards may be adopted when current eighth graders (the first group affected by the new graduation requirements) complete their high school education. The proposed compromise balances the stated intent of the State Board of Education to increase the rigor of high school education and to do so incrementally while high schools begin the process of more rigorously educating their students.

Attachment A provides a summary of the results of the MME standard setting process in terms of the recommended cut scores, including the compromise proposed by MDE staff. Attachment B provides a summary of the panelists' evaluation of the MME process.

For your information, the cut scores as projected from the current MEAP High School Assessment on the MME, the cut scores recommended by the panels, the college readiness benchmarks, and the compromise as described above are displayed in attachment C.

**It is recommended that the State Board of Education approve the performance standards as recommended by the standard setting panels with the college readiness compromise for the MME, and to use these performance standards in reporting the MME results from Spring 2007 and forward as described in the Superintendents memorandum dated October 30, 2006.**

**Recommended MME Cut Scores**

The results presented to the State Board of Education are comprised of the recommended cut scores (including the compromise between college-readiness benchmarks and the panelist recommendations for the “met standards” cut score). Other information is available to answer any questions including the complete final standard setting plan and technical report.

The Office of Educational Assessment & Accountability, the Pearson Educational Measurement facilitators, and the Assessment & Evaluation Services facilitators carefully monitored the process to assure that the panelists were focused upon the Performance Level Descriptors, upon the items on the assessments, upon student work on the assessments, and that all other parts of the approved process were followed.

**Recommended MME Cut Scores**

| Subject     | Basic   | Met Michigan Standards | Exceeded Michigan Standards | Anchor                           |
|-------------|---------|------------------------|-----------------------------|----------------------------------|
| Reading     | -1.7135 | 0.1118                 | 1.0525                      | Spring 2006 Pilot Administration |
| Writing     | -1.6440 | 0.0928                 | 1.7818                      | Spring 2006 Pilot Administration |
| Mathematics | -0.6474 | 0.4144                 | 0.9168                      | Spring 2006 Pilot Administration |
| Science     | -1.0414 | 0.4103                 | 0.9924                      | Spring 2006 Pilot Administration |

The recommended cut scores as displayed above are on the theta scale from the three-parameter Item Response Theory calibration of the spring 2006 Pilot Administration as performed by ACT.

After the standards are approved by the State Board of Education, the scales will be transformed so that the Met Michigan Standards cut score is 1100 and the standard deviation is 25 for all subjects. The final MME scales will run from approximately 900 to approximately 1400.

### Panelist Evaluations of the MME Standard Setting Process

Please indicate the level of success of various components of the standard setting study

| Panel       | Component   | Not Successful | Partially Successful | Successful | Very Successful |
|-------------|---|----------------|----------------------|------------|-----------------|
| Reading     | <b>Introduction to the Test</b>                           | <b>0%</b>      | <b>7%</b>            | <b>53%</b> | <b>40%</b>      |
|             | Performance Level Descriptors Development Activity        | 0%             | 13%                  | 67%        | 20%             |
|             | <b>Performance Level Review</b>                           | <b>0%</b>      | <b>0%</b>            | <b>60%</b> | <b>40%</b>      |
|             | Process Training  | 0%             | 0%                   | 53%        | 47%             |
|             | <b>Practice Exercise</b>                                  | <b>0%</b>      | <b>0%</b>            | <b>33%</b> | <b>67%</b>      |
|             | Group Discussions   | 0%             | 7%                   | 27%        | 67%             |
|             | <b>Data Presentations</b>                                 | <b>0%</b>      | <b>13%</b>           | <b>47%</b> | <b>40%</b>      |
| Writing     | Introduction to the Test                                  | 0%             | 0%                   | 57%        | 43%             |
|             | <b>Performance Level Descriptors Development Activity</b> | <b>0%</b>      | <b>0%</b>            | <b>43%</b> | <b>57%</b>      |
|             | Performance Level Review                                  | 0%             | 0%                   | 43%        | 57%             |
|             | Process Training  | <b>0%</b>      | <b>0%</b>            | <b>57%</b> | <b>43%</b>      |
|             | Practice Exercise   | 0%             | 7%                   | 43%        | 50%             |
|             | Group Discussions   | 0%             | 7%                   | 21%        | 71%             |
|             | Data Presentations  | 0%             | 0%                   | 50%        | 50%             |
| Mathematics | <b>Introduction to the Test</b>                           | <b>0%</b>      | <b>6%</b>            | <b>17%</b> | <b>78%</b>      |
|             | Performance Level Descriptors Development Activity        | 0%             | 44%                  | 44%        | 11%             |
|             | <b>Performance Level Review</b>                           | <b>0%</b>      | <b>28%</b>           | <b>44%</b> | <b>28%</b>      |
|             | Process Training  | 0%             | 6%                   | 39%        | 56%             |
|             | <b>Practice Exercise</b>                                  | <b>0%</b>      | <b>6%</b>            | <b>33%</b> | <b>61%</b>      |
|             | Group Discussions   | 0%             | 0%                   | 39%        | 61%             |
|             | <b>Data Presentations</b>                                 | <b>0%</b>      | <b>0%</b>            | <b>22%</b> | <b>78%</b>      |
| Science     | Introduction to the Test                                  | 0%             | 6%                   | 65%        | 29%             |
|             | <b>Performance Level Descriptors Development Activity</b> | <b>0%</b>      | <b>18%</b>           | <b>59%</b> | <b>24%</b>      |
|             | Performance Level Review                                  | 0%             | 6%                   | 59%        | 35%             |
|             | Process Training  | <b>0%</b>      | <b>18%</b>           | <b>77%</b> | <b>6%</b>       |
|             | Practice Exercise   | 0%             | 12%                  | 59%        | 29%             |
|             | Group Discussions   | <b>0%</b>      | <b>12%</b>           | <b>35%</b> | <b>53%</b>      |
|             | Data Presentations  | 0%             | 12%                  | 59%        | 29%             |

Please indicate the importance of the following factors in setting cut

| Panel       | Factor  | Not Important | Somewhat Important | Important  | Very Important |
|-------------|---|---------------|--------------------|------------|----------------|
| Reading     | <b>Performance Level Descriptors</b>                        | <b>0%</b>     | <b>21%</b>         | <b>29%</b> | <b>50%</b>     |
|             | Your perceptions of the difficulty of the assessment        | 7%            | 7%                 | 53%        | 33%            |
|             | <b>Your perceptions of the quality of student responses</b> | <b>0%</b>     | <b>13%</b>         | <b>53%</b> | <b>33%</b>     |
|             | Your own classroom experience                               | 7%            | 7%                 | 47%        | 40%            |
|             | <b>Your initial classification of student performance</b>   | <b>7%</b>     | <b>43%</b>         | <b>43%</b> | <b>7%</b>      |
|             | Panel discussions   | 0%            | 7%                 | 33%        | 60%            |
|             | <b>Feedback data</b>  | <b>0%</b>     | <b>0%</b>          | <b>40%</b> | <b>60%</b>     |
|             | Policy environment  | 7%            | 29%                | 21%        | 43%            |
|             | <b>What students would vs. should be able to do</b>         | <b>7%</b>     | <b>20%</b>         | <b>40%</b> | <b>33%</b>     |
| Writing     | Performance Level Descriptors                               | 0%            | 0%                 | 39%        | 62%            |
|             | <b>Your perceptions of the difficulty of the assessment</b> | <b>0%</b>     | <b>23%</b>         | <b>31%</b> | <b>46%</b>     |
|             | Your perceptions of the quality of student responses        | 0%            | 15%                | 54%        | 31%            |
|             | Your own classroom experience                               | 0%            | 15%                | 23%        | 62%            |
|             | Your initial classification of student performance          | 0%            | 15%                | 77%        | 8%             |
|             | Panel discussions   | 0%            | 0%                 | 39%        | 62%            |
|             | Feedback data   | 0%            | 8%                 | 15%        | 77%            |
|             | Policy environment  | 0%            | 8%                 | 85%        | 8%             |
|             | What students would vs. should be able to do                | 0%            | 15%                | 39%        | 46%            |
| Mathematics | <b>Performance Level Descriptors</b>                        | <b>0%</b>     | <b>6%</b>          | <b>33%</b> | <b>61%</b>     |
|             | Your perceptions of the difficulty of the assessment        | 11%           | 22%                | 33%        | 33%            |
|             | <b>Your perceptions of the quality of student responses</b> | <b>6%</b>     | <b>17%</b>         | <b>44%</b> | <b>33%</b>     |
|             | Your own classroom experience                               | 6%            | 11%                | 39%        | 44%            |
|             | <b>Your initial classification of student performance</b>   | <b>0%</b>     | <b>22%</b>         | <b>67%</b> | <b>11%</b>     |
|             | Panel discussions   | 0%            | 17%                | 28%        | 56%            |
|             | <b>Feedback data</b>  | <b>0%</b>     | <b>11%</b>         | <b>22%</b> | <b>67%</b>     |
|             | Policy environment  | 0%            | 18%                | 41%        | 41%            |
|             | <b>What students would vs. should be able to do</b>         | <b>0%</b>     | <b>12%</b>         | <b>29%</b> | <b>59%</b>     |
| Science     | Performance Level Descriptors                               | 0%            | 0%                 | 31%        | 69%            |
|             | <b>Your perceptions of the difficulty of the assessment</b> | <b>6%</b>     | <b>19%</b>         | <b>31%</b> | <b>44%</b>     |
|             | Your perceptions of the quality of student responses        | 0%            | 25%                | 56%        | 19%            |
|             | Your own classroom experience                               | 0%            | 25%                | 19%        | 56%            |
|             | Your initial classification of student performance          | 0%            | 19%                | 63%        | 19%            |
|             | <b>Panel discussions</b>                                    | <b>0%</b>     | <b>25%</b>         | <b>19%</b> | <b>56%</b>     |
|             | Feedback data   | 0%            | 0%                 | 50%        | 50%            |
|             | Policy environment  | 0%            | 46%                | 31%        | 23%            |
|             | What students would vs. should be able to do                | 13%           | 13%                | 44%        | 31%            |

## Explanation of Bar Graphs

In the following bar graphs, the approximate percentages of students in the exceeded category are given in the white portions of the bars. The approximate percentages of students in the met, basic, and apprentice categories are shown respectively in the light gray, dark gray, and black portions of the bars.

The *MEAP equated* column gives the approximate percentage of students that would fall into each performance level if the old MEAP high school cut scores were translated onto the MME scales.

The *Panel recommendation* column gives the approximate percentage of students that would fall into each performance level if the panel recommendations were adopted as MME cut scores.

The *ACT College Ready* column gives the approximate percentage of students that would fall into each performance level if the ACT college readiness benchmarks were translated onto the MME scale as the met standards cut scores.

The *Compromise* column gives the approximate percentage of students that would fall into each performance level if the compromise recommended by MDE staff were adopted as MME cut scores.

## Explanation of Line Graphs

The data presented in the following line graphs are based upon the data from the spring 2006 pilot study. Therefore, the impacts identified in these graphics are projections from the pilot sample to the statewide percentages in each performance level. The bar graphs indicate the approximate percentage of students that would fall into each performance level.

In the following line graph, various possibilities for cut scores are presented in terms the approximate ACT scores that would result were the different possibilities to be approved as MME cut scores. The cut score between the met standards and exceeded standards categories is shown with hollow squares. The cut score between the basic and met standards categories is shown with a filled diamond. The cut score between the apprentice and basic categories is shown with a hollow circle.

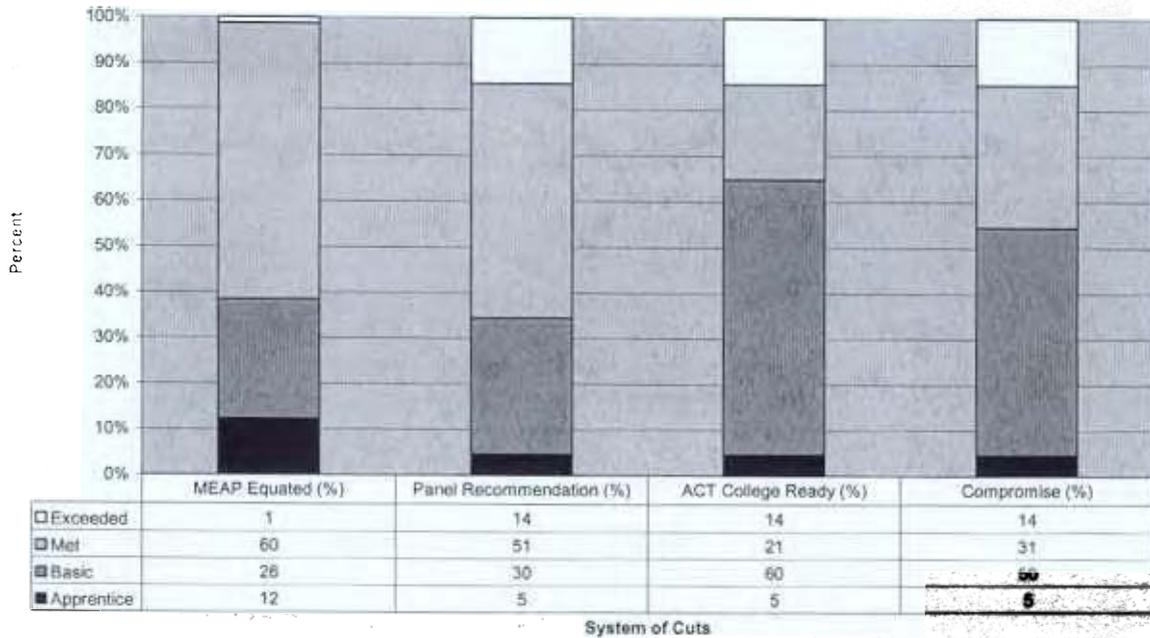
The *MEAP equated* column gives the approximate ACT score achieved by students who were at the cut scores on the old MEAP High School Assessment.

The *Panel recommendation* column gives the approximate ACT score achieved by students who scored on the MME at the cut scores recommended by the panels.

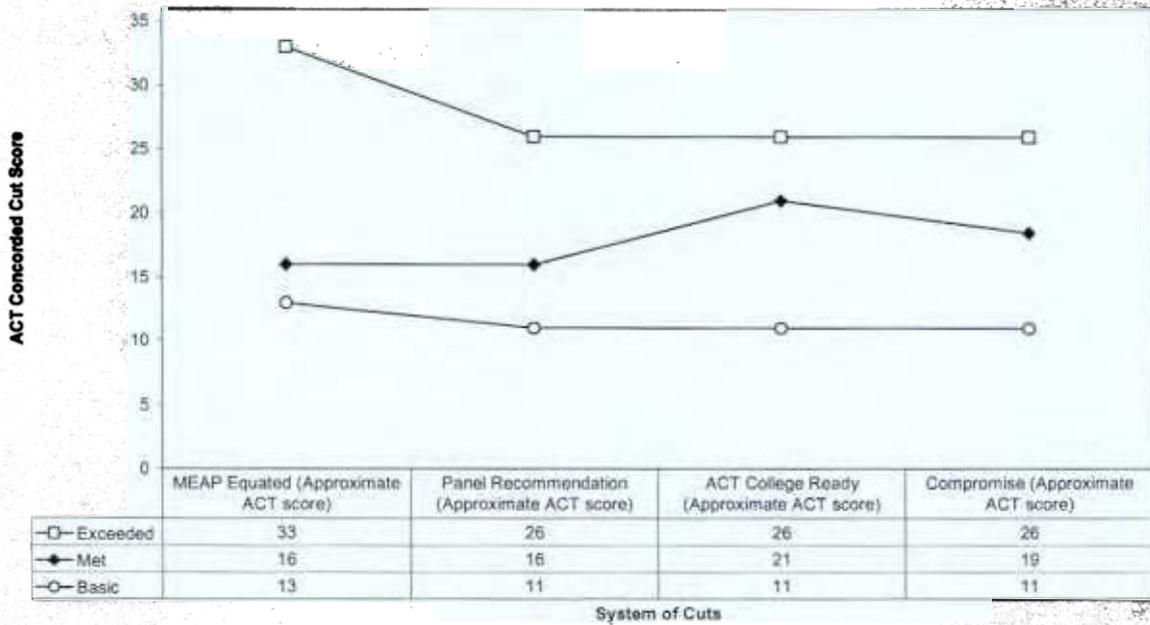
The *ACT College Ready* column gives the ACT score defined by ACT as college ready (or the ACT score required to give a 50% probability of obtaining a B or higher in a freshman college course).

The *Compromise* column gives the approximate ACT scores of students scoring at the panel-recommended cut scores for the “basic” and “exceeded” cut scores, and at the compromise between the panel-recommended cut scores and the ACT college-ready benchmark for the “met” cut scores.

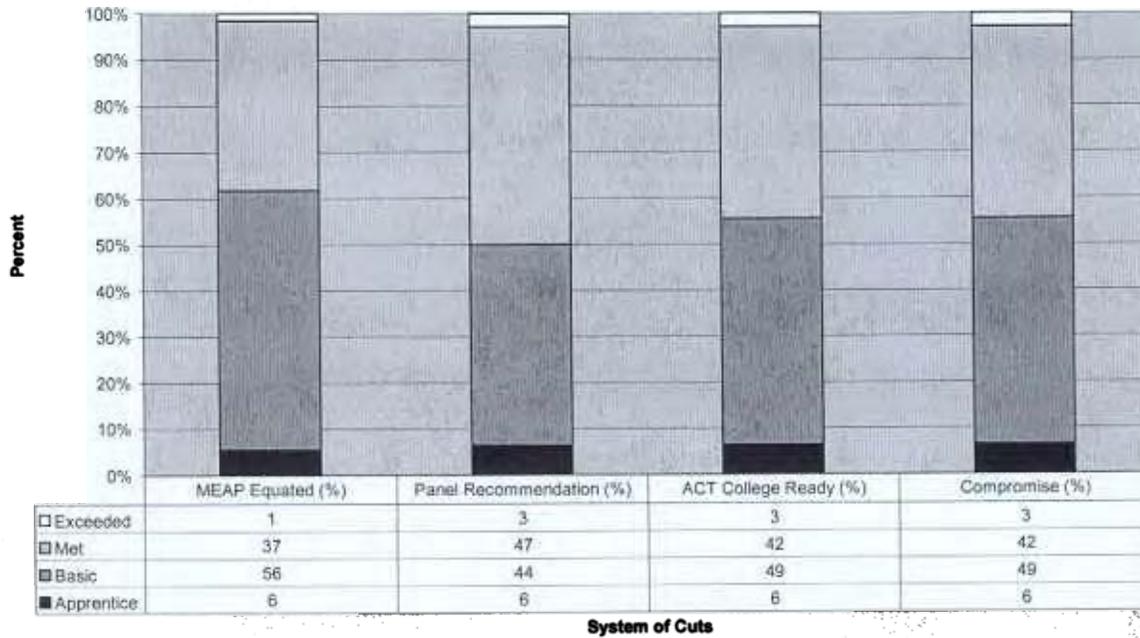
**Reading**  
**Percent of Students in Each Performance Level**  
**for Each System of Cut Scores**



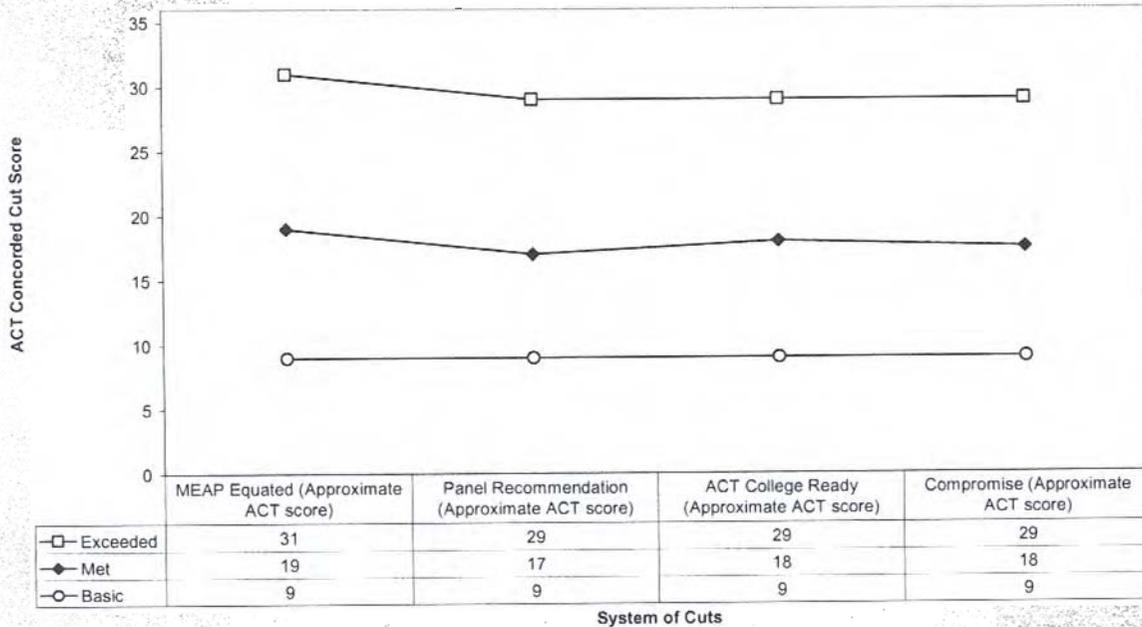
**Reading**  
**Approximate ACT Scores Equivalent to the MME Cuts**  
**for Each System of Cut Scores**



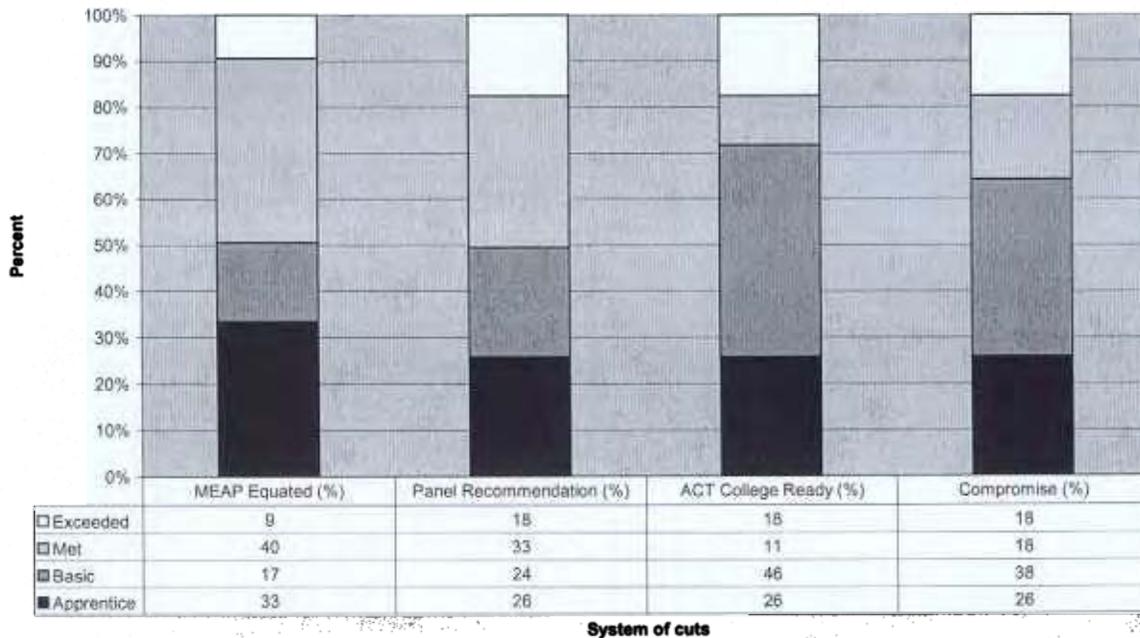
**Writing**  
**Percent of Students in Each Performance Level**  
**for Each System of Cut Scores**



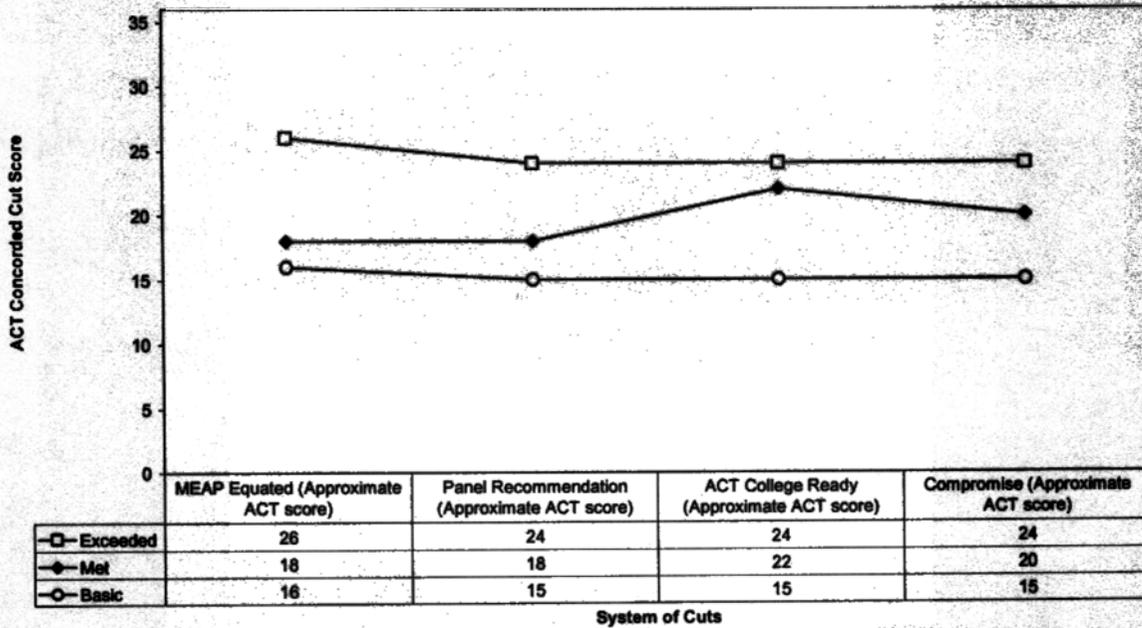
**Writing**  
**Approximate ACT Scores Equivalent to the MME Cuts**  
**for Each System of Cut Scores**



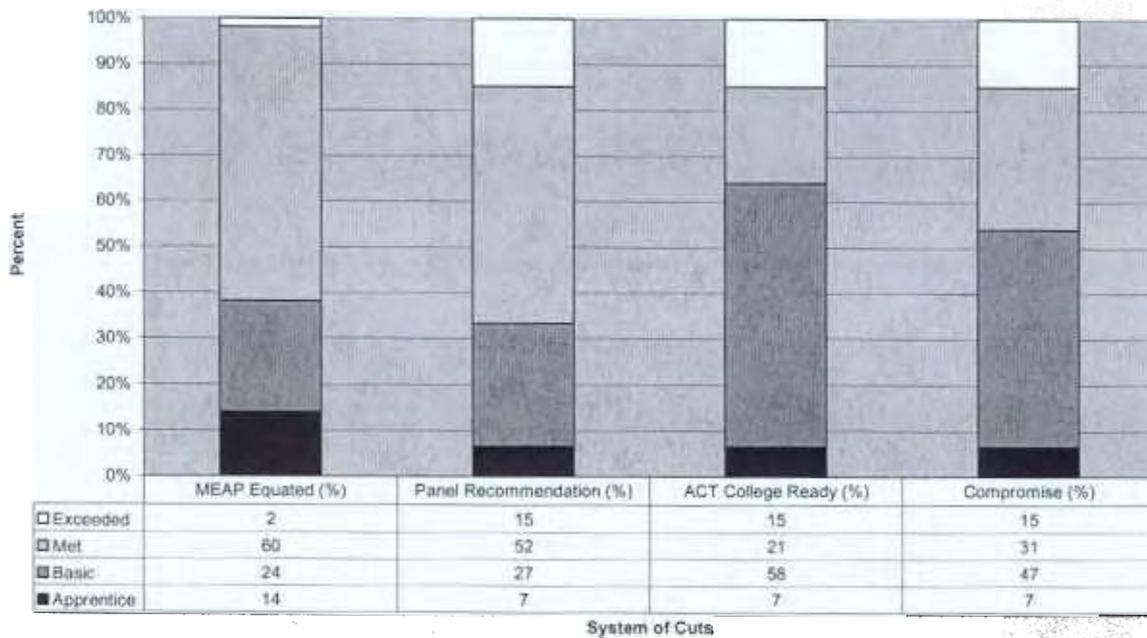
**Mathematics**  
**Percent of Students in Each Performance Level**  
**for Each System of Cut Scores**



**Mathematics**  
**Approximate ACT Scores Equivalent to the MME Cuts**  
**for Each System of Cut Scores**



**Science**  
**Percent of Students in Each Performance Level**  
**for Each System of Cut Scores**



**Science**  
**Approximate ACT Scores Equivalent to the MME Cuts**  
**for Each System of Cut Scores**

