PERFORMANCE AUDIT
OF THE

MICHIGAN EDUCATIONAL ASSESSMENT PROGRAM

DEPARTMENT OF EDUCATION AND
DEPARTMENT OF TREASURY

31-200-99

EXECUTIVE DIGEST

MICHIGAN EDUCATIONAL ASSESSMENT PROGRAM

INTRODUCTION

This report contains the results of our performance audit* of the Michigan Educational Assessment Program* (MEAP), Department of Education and Department of Treasury.

AUDIT PURPOSE

This performance audit was conducted as part of the constitutional responsibility of the Office of the Auditor General. Performance audits are conducted on a priority basis related to the potential for improving effectiveness* and efficiency*.

BACKGROUND

Article VIII, Section 3 of the State Constitution vests in the State Board of Education the leadership and general supervision over all public instruction. Prior to January 1, 2000, the Office of Standards, Assessment, and Accreditation, Department of Education, was responsible for administering MEAP. Effective January 1, 2000, Executive Order No. 1999-12 transferred MEAP to the Department of Treasury.

First introduced in 1970, MEAP has been a Statewide testing program initiated by the State Board of Education and funded by the Legislature. MEAP's mission* is to

* *See glossary at end of report for definition.*

develop the best possible assessments of student academic knowledge and skills. MEAP's goal* is to provide data to school districts* to use in assessing their instructional programs and to provide information on the status and educational progress of Michigan's schools in specified subject areas to the Legislature, the State Board of Education, the Executive Office, local educators, students, and parents.

MEAP has evolved over the years in response to current research on learning, new areas of emphasis in curriculum and assessment, and increased interest in the performance and accountability of Michigan schools. MEAP is based on objective-referenced tests meeting specific standards established by the State Board of Education that are performance-based and designed to be an indicator of educational progress over time. MEAP will provide assistance to interpret, use, and report student achievement information as one basis for improving schools' instructional programs.

The tests include the MEAP essential skills mathematics and reading tests for all students in grades 4 and 7; the MEAP science, writing, and social studies tests for all students in grades 5 and 8; and the MEAP High School Test (HST)* subjects of mathematics, science, reading, writing, and social studies for all students in grade 11.

For the fiscal year ended September 30, 1999, the Department of Education expended approximately $8.1 million in administering its MEAP responsibilities. As of August 5, 1999, the Department of Education had 17 full-time equated employees assigned to MEAP.

* *See glossary at end of report for definition.*

AUDIT OBJECTIVES AND CONCLUSIONS

Audit Objective: To evaluate MEAP's effectiveness in assessing students' academic knowledge and skills.

Conclusion: We concluded that MEAP was generally effective in assessing students' academic knowledge and skills. However, our evaluation disclosed one material condition*:

- MEAP should formally establish the necessary numerical degree of reliability* that the MEAP HST should achieve in relation to statutory requirements and routinely compare test results with that degree of reliability (Finding 1).

  The Department of Treasury agreed with the corresponding recommendation and informed us that it will take corrective action.

Audit Objective: To assess MEAP's effectiveness in providing MEAP data and test results to school districts to improve students' academic knowledge and skills.

Conclusion: We concluded that MEAP was generally effective in providing grades 4, 5, 7, and 8 MEAP data and test results to school districts to improve students' academic knowledge and skills. However, we also concluded that MEAP was somewhat effective in providing MEAP HST data and test results to school districts to improve students' academic knowledge and skills. Our assessment disclosed one material condition:

- MEAP should increase the usefulness of MEAP HST results provided to school districts for assessing and

* *See glossary at end of report for definition.*

improving their instructional programs and include all appropriate student results in the data reported to school districts (Finding 2).

The Department of Treasury agreed with the corresponding recommendation and informed us that it had taken corrective action.

Also, our assessment disclosed reportable conditions* related to MEAP HST administration and MEAP HST security (Findings 3 and 4).

Audit Objective: To assess the reasonableness of and compliance with test development and test scoring procedures.

Conclusion: We concluded that MEAP generally complied with test development and test scoring procedures. However, our assessment disclosed reportable conditions related to controls over compiling and reporting test results and loss of MEAP records (Findings 5 and 6).

Audit Objective: To assess other pertinent issues related to MEAP.

Conclusion: Our assessment disclosed reportable conditions related to MEAP contract management and MEAP HST testing materials (Findings 7 and 8).

AUDIT SCOPE AND METHODOLOGY

Our audit scope was to examine the program and other records of the Michigan Educational Assessment Program. Our audit was conducted in accordance with *Government Auditing Standards* issued by the Comptroller General of the United States and, accordingly, included such tests of

* *See glossary at end of report for definition.*

the records and such other auditing procedures as we considered necessary in the circumstances.

Our ability to achieve our third audit objective in accordance with *Government Auditing Standards* was impeded by the accidental disposition of documentation for the development and scoring of the current grades 4 and 7 mathematics tests first administered in school year 1991-92; the current grades 4 and 7 reading tests first administered in school year 1989-90; the current grades 5 and 8 science and writing tests first administered in school year 1995-96; and the current MEAP HST subjects of mathematics, science, reading, and writing first administered in school year 1995-96 (Finding 6). The Department of Education provided us with documentation for the development and scoring of the current grade 5, grade 8, and high school science and social studies tests first administered in school year 1998-99. Our review of these records disclosed no reportable conditions. However, we could not assess whether the destroyed documentation would have affected our conclusion on our third objective.

Our audit procedures included an examination of MEAP and selected school district records for the period September 1995 through June 1999.

Our methodology included a preliminary survey of MEAP operations. This included interviewing various MEAP staff and reviewing applicable statutes, policies and procedures, reports, and other reference materials.

We visited 27 high schools* in 18 school districts and interviewed staff who administered the MEAP HST and received test results. We observed testing practices and

* *See glossary at end of report for definition.*

assessed security over testing materials at the high schools. We examined student records related to MEAP tests and grades earned since grade 4. Also, we interviewed 11 middle school* administrators in the school districts visited who administered the MEAP tests and utilized the test results.

We reviewed methods used by MEAP to measure and evaluate the effectiveness of its tests. Also, we performed a correlation analysis of subject grades and the corresponding subject MEAP test scores for a random sample of students who participated in the MEAP HST during school year 1997-98. In addition, we examined independent assessments of MEAP tests.

We analyzed MEAP data to determine compliance with statutes and contractual provisions and populations of tested students. We reviewed MEAP's processes for developing its tests, assessing the tests for reliability and validity*, and establishing the scores used in determining testing performance levels.

AGENCY RESPONSES

Our audit report includes 8 findings and 10 corresponding recommendations. The Department of Treasury's preliminary response indicated that it agreed with all of the recommendations.

* *See glossary at end of report for definition.*

June 29, 2001

Mr. Thomas D. Watkins, Jr., Chairperson
State Board of Education
Hannah Building
Lansing, Michigan
and
Dr. Douglas B. Roberts
State Treasurer
Treasury Building
Lansing, Michigan

Dear Mr. Watkins and Dr. Roberts:

This is our report on the performance audit of the Michigan Educational Assessment Program, Department of Education and Department of Treasury.

This report contains our executive digest; description of program; audit objectives, scope, and methodology and agency responses; comments, findings, recommendations, and agency preliminary responses; an exhibit showing grade 11 students' participation rate, presented as supplemental information; and a glossary of acronyms and terms.

Our comments, findings, and recommendations are organized by audit objective. The agency preliminary responses were taken from the Department of Treasury's responses subsequent to our audit fieldwork. The *Michigan Compiled Laws* and administrative procedures require that the audited agency develop a formal response within 60 days after release of the audit report.

We appreciate the courtesy and cooperation extended to us during this audit.

Sincerely,

Thomas H. McTavish, C.P.A.
Auditor General

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AND
DEPARTMENT OF TREASURY

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Description of Program

First introduced in 1970, the Michigan Educational Assessment Program (MEAP) has been a Statewide testing program initiated by the State Board of Education and funded by the Legislature. MEAP's mission is to develop the best possible assessments of student academic knowledge and skills. MEAP will provide assistance to interpret, use, and report student achievement information as one basis for improving schools' instructional programs. MEAP's goal is to provide data to school districts to use in assessing their instructional programs and to provide information on the status and educational progress of Michigan's schools in specified subject areas to the Legislature, the State Board of Education, the Executive Office, local educators, students, and parents.

MEAP has evolved over the years in response to current research on learning, new areas of emphasis in curriculum and assessment, and increased interest in the performance and accountability of Michigan schools. MEAP is based on objective-referenced tests meeting specific standards established by the State Board of Education that are performance-based and designed to be an indicator of educational progress over time.

MEAP tests include:

1. The MEAP essential skills mathematics and reading tests for all students in grades 4 and 7;

2. The MEAP science, writing, and social studies tests for all students in grades 5 and 8;

3. The MEAP High School Test (HST) subjects of mathematics, science, reading, writing, and social studies for all students in grade 11.

Effective June 30, 1999, Act 94, P.A. 1999, established the Michigan Merit Award Scholarship Program* (MMASP) in the Department of Treasury. Also, the Act established the Michigan Merit Award Trust Fund Commission to oversee the Michigan Merit Award Trust Fund. Specific percentages of the State's tobacco settlement award

* *See glossary at end of report for definition.*

have been dedicated to the Trust Fund to fund merit awards for eligible students. Students meeting specific performance standards on the MEAP tests are eligible for an MMASP merit award of up to $3,000. The Act allows MMASP merit awards be used to pay tuition and fees, as well as specified related costs, at approved postsecondary* educational institutions.

Article VIII, Section 3 of the State Constitution provides for an elected eight-member State Board of Education and vests in the Board the leadership and general supervision over all public instruction. The Board appoints the Superintendent of Public Instruction, who is the principal executive officer of the Department of Education. The Department of Education was established by the Executive Organization Act of 1965 (Act 380, P.A. 1965).

Prior to January 1, 2000, the Office of Standards, Assessment, and Accreditation, Department of Education, was responsible for administering MEAP. On October 19, 1999, the Governor issued Executive Order No. 1999-12, which transferred all of the administrative statutory powers, duties, functions, and responsibilities of the State Board of Education and the Superintendent of Public Instruction as they relate to MEAP assessments to the Department of Treasury effective January 1, 2000. The State Board of Education retained the authority to determine the policies, if any, on which the administration of MEAP assessments shall be based.

For the fiscal year ended September 30, 1999, the Department of Education expended approximately $8.1 million in administering its MEAP responsibilities. As of August 5, 1999, the Department of Education had 17 full-time equated employees assigned to MEAP.

* *See glossary at end of report for definition.*

Audit Objectives, Scope, and Methodology and Agency Responses

Audit Objectives

Our performance audit of the Michigan Educational Assessment Program (MEAP), Department of Education and Department of Treasury, had the following objectives:

1. To evaluate MEAP's effectiveness in assessing students' academic knowledge and skills.

2. To assess MEAP's effectiveness in providing MEAP data and test results to school districts to improve students' academic knowledge and skills.

3. To assess the reasonableness of and compliance with test development and test scoring procedures.

4. To assess other pertinent issues related to MEAP.

Audit Scope

Our audit scope was to examine the program and other records of the Michigan Educational Assessment Program. Our audit was conducted in accordance with *Government Auditing Standards* issued by the Comptroller General of the United States and, accordingly, included such tests of the records and such other auditing procedures as we considered necessary in the circumstances.

Our ability to achieve our third audit objective in accordance with *Government Auditing Standards* was impeded by the accidental disposition of documentation for the development and scoring of the current grades 4 and 7 mathematics tests first administered in school year 1991-92; the current grades 4 and 7 reading tests first administered in school year 1989-90; the current grades 5 and 8 science and writing tests first administered in school year 1995-96; and the current MEAP High School Test subjects of mathematics, science, reading, and writing first administered in school year 1995-96 (Finding 6). The Department of Education provided us with documentation for the development and scoring of the current grade 5, grade 8, and high school science and social studies tests first administered in school year 1998-99. Our review of these

records disclosed no reportable conditions. However, we could not assess whether the destroyed documentation would have affected our conclusion on our third objective.

Audit Methodology

Our audit work was performed between February 1999 and January 2000 and included an examination of MEAP and selected school district records for the period September 1995 through June 1999.

Our methodology included a preliminary survey of MEAP operations. This included interviewing various MEAP staff and reviewing applicable statutes, policies and procedures, reports, and other reference materials. We obtained and reviewed audit reports on similar programs in other states.

We visited 27 high schools in 18 school districts and interviewed staff who administered the MEAP High School Test (HST) and received test results. We observed testing practices and examined student records related to MEAP tests and grades earned since grade 4. Also, we interviewed 11 middle school administrators in the school districts visited who administered the MEAP tests and utilized the test results.

We reviewed methods used by MEAP to measure and evaluate the effectiveness of its tests. We analyzed MEAP data to determine compliance with statutes and contractual provisions, populations of tested students, MEAP activity, and trends.

To accomplish our first audit objective, we performed a correlation analysis of subject grades and the corresponding subject MEAP test scores for a random sample of students who participated in the MEAP HST during school year 1997-98. Also, we examined independent assessments of MEAP tests and surveyed educational professionals in the school districts visited.

To accomplish our second audit objective, we surveyed educational professionals at the school districts visited and State universities as to the usefulness and actual use of MEAP test results.

To accomplish our third audit objective, we reviewed MEAP's processes for developing its tests, assessing the tests for reliability and validity, and establishing the scores used in determining testing performance levels.

To accomplish our fourth audit objective, we observed the administration of MEAP tests and assessed security over testing materials in selected school districts.

Agency Responses

Our audit report contains 8 findings and 10 corresponding recommendations. The Department of Treasury's preliminary response indicated that it agreed with all of the recommendations.

The agency preliminary response which follows each recommendation in our report was taken from the Department of Treasury's written comments and oral discussion subsequent to our audit fieldwork. Section 18.1462 of the *Michigan Compiled Laws* and Department of Management and Budget Administrative Guide procedure 1280.02 require the Department of Treasury to develop a formal response to our audit findings and recommendations within 60 days after release of the audit report.

COMMENTS, FINDINGS, RECOMMENDATIONS, AND AGENCY PRELIMINARY RESPONSES

EFFECTIVENESS IN ASSESSING STUDENTS' ACADEMIC KNOWLEDGE AND SKILLS

COMMENT

Audit Objective: To evaluate the Michigan Educational Assessment Program's (MEAP's) effectiveness in assessing students' academic knowledge and skills.

Conclusion: We concluded that MEAP was generally effective in assessing students' academic knowledge and skills. However, our evaluation disclosed one material condition. MEAP should formally establish the necessary numerical degree of reliability that the MEAP High School Test (HST) should achieve in relation to statutory requirements and routinely compare test results with that degree of reliability.

FINDING

1. MEAP HST Reliability

MEAP should formally establish the necessary numerical degree of reliability that the MEAP HST should achieve in relation to statutory requirements and routinely compare test results with that degree of reliability.

Professional testing literature states that reliability is one of the two most important aspects of a sound testing instrument. MEAP HST is a criterion-referenced test* designed to provide information on the status of Michigan education in specified content areas based on the Michigan Model Core Curriculum. To help ensure that the test is appropriate for use as a basis for improving instructional programs, Section 380.1279(6) of the *Michigan Compiled Laws* requires that the MEAP HST be as short as possible and still maintain the degree of reliability and validity of the assessment results determined necessary by the Department of Education. Although the Department of Education stated that it is expected that MEAP tests

* *See glossary at end of report for definition.*

will have a high level of reliability and MEAP staff believe that the tests are reliable, MEAP had not formally established the necessary numerical degree of reliability that the MEAP HST should achieve in relation to statutory requirements.

Test reliability is defined as the consistency of test scores or a measure that indicates whether a specific test, when administered on different occasions, will produce the same test results. Perfect reliability would be quantified as a level of 1.0. A MEAP contractor determines MEAP HST reliability using internal consistency formulas which are designed to verify that test items are measuring the same thing and that students are answering consistently. As determined by the contractor, MEAP reported the following MEAP HST reliability for the first four years that the test was administered:

Subject	School Year	Form	Reliability
Mathematics	1995-96	A	.902
	1996-97	C	.911
	1997-98	X	.900
	1998-99	X	.892
Science	1995-96	A	.883
	1996-97	C	.895
	1997-98	X	.896
	1998-99	X	.878
Reading	1995-96	A	.810
	1995-96	B	.861
	1996-97	A	.820
	1996-97	B	.855
	1997-98	X	.848
	1998-99	X	.830
Writing	1995-96	A	.661
	1995-96	B	.689
	1996-97	C	.654
	1996-97	B	.674
	1997-98	X	.581
	1998-99	X	.610

X - Only one form of the test was used during the school year.

Source: Department of Education (unaudited information).

To independently assess the appropriateness of MEAP HST reliability, MEAP administrators informed us that MEAP's Technical Advisory Committee* reviewed the contractor's computed reliability for the initial school year 1995-96 MEAP HST and had no concerns about the computed reliability. MEAP administrators also provided us with related Committee meeting minutes. However, MEAP administrators could not provide us with a written report of the Committee's review. Therefore, we could not determine the extent and actual results of the Committee's review. The Committee had not reviewed the reliability of school year 1998-99, 1997-98, or 1997-96 tests even though the reliability of certain subject test components has declined. The Department of Education indicated in a description of MEAP HST reliability that the reading and writing tests have relatively lower reliability because the tests contain fewer test items.

Formally establishing the necessary numerical degree of reliability that the MEAP HST should achieve and comparing test results with that degree of reliability should ensure that the test is appropriate for use as a basis for improving instructional programs as required by statute.

RECOMMENDATION

We recommend that MEAP formally establish the necessary numerical degree of reliability that the MEAP HST should achieve in relation to statutory requirements and routinely compare test results with that degree of reliability.

AGENCY PRELIMINARY RESPONSE

The Department of Treasury agreed with this recommendation and informed us that it will formally establish predetermined reliability levels. It is understood that the actual reliability of the assessments is not at issue, but rather the development of predetermined objectives.

* *See glossary at end of report for definition.*

EFFECTIVENESS IN PROVIDING MEAP DATA AND TEST RESULTS TO SCHOOL DISTRICTS TO IMPROVE STUDENTS' ACADEMIC KNOWLEDGE AND SKILLS

COMMENT

Audit Objective: To assess MEAP's effectiveness in providing MEAP data and test results to school districts to improve students' academic knowledge and skills.

Conclusion: We concluded that MEAP was generally effective in providing grades 4, 5, 7, and 8 MEAP data and test results to school districts to improve students' academic knowledge and skills. However, we also concluded that MEAP was somewhat effective in providing MEAP HST data and test results to school districts to improve students' academic knowledge and skills. Our assessment disclosed one material condition. MEAP should increase the usefulness of MEAP HST results provided to school districts for assessing and improving their instructional programs and include all appropriate student results in the data reported to school districts. Also, our assessment disclosed reportable conditions related to MEAP HST administration and MEAP HST security.

FINDING

2. MEAP HST Results

MEAP should increase the usefulness of MEAP HST results provided to school districts for assessing and improving their instructional programs and include all appropriate student results in the data reported to school districts.

The MEAP mission statement states, in part, that "MEAP will provide assistance to interpret, use, and report student achievement information as one basis for improving schools' instructional programs." However, administrators and teachers at all of the 18 school districts that we visited informed us that they did not use the MEAP HST results to assess and improve their instructional programs because they did not believe the results were useful.

We determined that several factors contributed to the school districts not using the MEAP HST results to assess and improve their instructional programs:

a. MEAP had not determined the effect of high MEAP HST nonparticipation rates on the validity of test results used to assess school district instructional programs.

   MEAP statutes require only that school districts offer MEAP testing to students. Students may elect not to participate in the tests. For the 1998 MEAP HST, 106 (20%) of the 519 school districts having 20 or more grade 11 students had less than 50% participation in at least one subject, while 73 (22%) of the 332 school districts having 100 or more grade 11 students had less than 50% participation in at least one subject of the MEAP HST. School districts that we visited experienced high school building nonparticipation rates for the MEAP HST during school years 1998-99, 1997-98, and 1996-97 ranging from 0% to 92%, 7% to 84%, and 4% to 43%, respectively (see exhibit of grade 11 students' participation rate). We question whether MEAP HST test results are valid for a school district or useful for assessing instructional programs when a significant percentage of the students do not participate in the test.

   Effective June 30, 1999, Act 94, P.A. 1999, established the Michigan Merit Award Scholarship Program (MMASP). MMASP created an incentive for participating in MEAP testing by providing students achieving qualifying results on MEAP tests or other specified academic assessment tests a merit award of up to $3,000 toward the cost of attending an approved postsecondary educational institution in Michigan. Although MMASP was not effective until after the spring 1999 MEAP HST was administered, the State and school districts informed students prior to testing of the potential to earn merit awards based on their performance on the spring 1999 MEAP HST. The effect that MMASP will have on student participation in MEAP testing should start to be realized beginning with the spring 2000 test administration.

b. MEAP did not provide specific test item analysis with the MEAP HST results delivered to school districts.

   Test item analysis identifies student performance at the class, school building, and school district levels on each question and provides users of the test

results with a relative measure of school district success in teaching the content standards and concepts tested in the MEAP tests. MEAP did not provide test item analysis for the MEAP HST because doing so would have required the disclosure of the test questions. During our audit period, MEAP had not developed a sufficient number of acceptable test questions to allow for the disclosure of the questions while maintaining the ability to provide reliable future tests. However, Act 94, P.A. 1999, effective June 30, 1999, provides for the release of most future MEAP HST questions soon after the test administration and the release of all questions no later than two years after the test is administered.

Providing specific test item analysis for most MEAP HST questions may provide school districts with data needed to help assess and, if necessary, make appropriate changes to their instructional programs.

c. The test results provided to school districts did not include the test scores for all participating students.

MEAP administrative practices specifically allow the exclusion of special education and limited English speaking students' test scores from school district testing results. However, MEAP reported test results for the 1998 MEAP HST that did not include the scores of approximately 3,000 grade 10 students who took the test in 1997 who were not special education or limited English speaking students. In addition, MEAP neither included the scores of approximately 6,000 grade 12 students who participated in the 1998 MEAP HST nor updated the respective 1997 school district MEAP HST testing results for these students.

State statutes require grade 11 students who desire to dual enroll in college classes to have earned as grade 10 students a qualifying score on the MEAP HST as a condition of tuition reimbursement by their school district. MEAP administrators informed us that the scoring contractor was to hold these grade 10 students' MEAP HST scores for inclusion with school district testing results when these students were grade 11 students. However, because of a statutory change that increased the number of scoring categories to 4 from 3 after the 1997 test administration, their 1997 scores were not compatible with the 1998 scoring categories. Therefore, the scores of these students were not included in their respective school district's 1998 results.

For the 1999 MEAP HST, our review disclosed that an error on the part of the scoring contractor resulted in the omission of approximately 2,200 grade 10 students who took the test in 1998. MEAP administrators informed us that this error was subsequently corrected.

Including the scores of all students participating in the tests would help ensure that users of MEAP results receive the most accurate and complete data available.

Providing pertinent MEAP HST results information to school districts for use in assessing their instructional programs is critical to achieving the MEAP mission of school improvement.

RECOMMENDATION

We recommend that MEAP increase the usefulness of MEAP HST results provided to school districts for assessing and improving their instructional programs and include all appropriate student results in the data reported to school districts.

AGENCY PRELIMINARY RESPONSE

The Department of Treasury agreed with this recommendation and informed us that the Michigan Merit Award has reduced the nonparticipation rate significantly and it is anticipated that this issue will be virtually eliminated within the next two years. Test item analyses are being provided to the schools, effective with the Class of 2000. Also, efforts are being made in cooperation with contractor and school district personnel to improve the efficiency of the MEAP test administration process. In addition, MEAP test exemption and exclusion policies and practices are being reviewed and clarified.

FINDING

3. MEAP HST Administration

MEAP should request amendatory legislation or initiate the promulgation of administrative rules to provide a legal basis for enforcing compliance with MEAP HST administration procedures and for monitoring school district test administration. Also, MEAP should revise its MEAP HST Administration Manual to provide for improved test administration by school districts.

Enabling legislation did not provide specific guidance on MEAP administrative policy and procedures. As a result, MEAP developed and provided to local school districts the MEAP HST Administration Manual, which recommended optimal testing conditions for students participating in MEAP. The Manual provided specific testing procedures and examples of appropriate and inappropriate testing practices.

Section 24.233 of the *Michigan Compiled Laws* (a section of the Administrative Procedures Act of 1969) specifies that an agency shall promulgate rules prescribing the procedures it used to implement or apply law enforced or administered by the agency. Because MEAP had not promulgated administrative rules, the Manual and other administrative policies and procedures were not subject to legislative oversight, were not discussed in a public forum, and did not have to be complied with by school districts. Also, MEAP did not have authority to monitor and enforce compliance with approved policies.

MEAP staff periodically visit school district buildings to observe test administration. However, MEAP administrators informed us that because of their lack of legal authority, some school districts did not allow MEAP staff to observe test administration in their buildings. Also, MEAP administrators informed us that, even though they did not have authority to take action on reported allegations of school district testing improprieties, in certain cases they had deleted a school district's scores from the publicly reported listing of Statewide school district scores.

The Spring 1999 MEAP HST Administration Manual specified a four-week period in which school districts were to conduct testing during 1 of 3 testing cycles, each

two weeks in length. To provide optimal testing conditions for students, the Manual strongly recommended the following testing schedule:

Week One

Monday	Tuesday	Wednesday	Thursday	Friday
Reading 80 minutes (approximately)	**Writing** Session One 35 minutes (exactly)	**Writing** Session Two 85 minutes (exactly)	**Mathematics** 80 minutes (approximately)	**Makeup Day**

Week Two

Monday	Tuesday	Wednesday	Thursday	Friday
Social Studies Part One 60 minutes (approximately)	**Social Studies** Part Two 50 minutes (approximately)	**Science** 80 minutes (approximately)	**Makeup Day**	**Makeup Day**

Our review of the spring 1999 MEAP HST testing schedule and observations of 27 high schools' test administration disclosed:

a. The MEAP HST testing schedule did not ensure that school districts conducted testing of the same subjects at the same time.

   Based on 3 testing cycles, school districts that conducted testing in the first cycle had completed testing before school districts that conducted testing in the third cycle had begun testing. Four school districts that we did not visit notified MEAP that they conducted their spring 1999 MEAP HST testing from 2 to 4 weeks after MEAP's specified four-week testing period. Conducting testing on different schedules could provide students with access to test content prior to taking the test.

b. None of the 27 high schools visited conducted testing in accordance with MEAP's recommended testing schedule.

   Twenty-five (93%) of the 27 high schools visited tested over fewer days than recommended or on different days than recommended. For example, one high school conducted all testing over only three consecutive days. Another high school conducted all testing during three nonconsecutive days. Also,

none of the 27 high schools visited conducted subject testing in the recommended subject testing order. One school administered the high school science test in two separate sessions. The Manual specifically recommended that the science portion of the MEAP HST be administered in one session. School districts that do not comply with the Manual's recommended testing schedule may harm and/or enhance their students' performance on the tests.

c. Staff at 4 (15%) of the 27 high schools visited did not allow additional time during the same testing session for students who required more time to complete untimed parts of the test, as required by the Manual.

For example, administrators at one high school visited informed us that they provided students with the opportunity to return to their uncompleted tests up to 11 days after the initial testing period. This practice provided students with the ability to revisit the tests after having access to test content and sufficient time to research unknown material.

d. The Manual's guidance created a potential conflict of interest for school district employees administering the tests.

The Manual indicated that tests should be administered by the person(s) responsible for instruction in the subject being tested even though test administrators are not to provide any guidance beyond the test instructions specifically provided in the Manual. Also, the Manual stated that test administrators should become familiar with the testing materials prior to testing. Administrators at 4 (15%) of the 27 high schools visited informed us that they provided teaching staff with access to testing materials prior to the administration of the test. One mathematics teacher at one high school visited informed us that, upon his review of the mathematics test prior to its administration, he discovered that his students had not been taught one of the mathematical concepts being tested. Indicating that he felt it unfair for the students to be tested on a concept that they had not been taught, he admitted to instructing his students on the concept prior to administering the test. Allowing test administrators to review test content prior to the test appears to serve no useful purpose and further increases the potential for test content to be disclosed prior to the test.

The Manual further states that the release of test content is an unethical and inappropriate practice. MEAP administrators informed us that they had unsuccessfully sought legislative authority to revoke educational teaching certificates for unethical or inappropriate practices by school district teaching staff. The lack of enforceable penalties for unethical or inappropriate school district practices reduces the likelihood of compliance with the Manual.

e. Some high schools may have used unethical and inappropriate test preparation activities aimed only at increasing short-term learning and test scores.

The Manual states that unethical and inappropriate activities are those aimed only at increasing short-term learning and test scores. For example, the Manual states that administering an excessive number of practice tests and using current or past MEAP test items are considered unethical and inappropriate activities.

Administrative and teaching staff at 6 (22%) of the 27 high schools visited informed us that, prior to the actual tests, they administered practice tests to students developed from past MEAP tests and questions designed to mirror the format of MEAP tests. Also, one of these school districts administered practice MEAP tests to students in grades 9 and 10 concurrently with the grade 11 MEAP testing. These practices may not be in compliance with the Manual.

Unethical and inappropriate test preparation activities may provide students with an unfair advantage in performance on the tests and inhibit the long-term retention of knowledge and skills.

f. The Manual should address the issue of incentives to students to help increase test participation.

Administrators in 13 (48%) of the 27 high schools visited informed us that they provided incentives to students. Such incentives included: breakfast, ice cream parties, pizza parties, awards for exceptional performance, awards for greatest school building participation, extra credit toward classes, and the opportunity to have the student's MEAP participation replace the final examination for the MEAP test subject class. In contrast, administrators in

another school district informed students that they were required to participate in the MEAP HST. State law requires only that school districts offer testing to students. To help ensure consistency, the Manual should provide guidance on incentives.

Initiating amendatory legislation or developing administrative rules would provide MEAP with the authority to monitor school district test administration and enforce compliance with the specific testing procedures indicated in the MEAP HST Administration Manual. These actions would help ensure more consistent test administration and increase the reliability, validity, and overall propriety of test results for use in curriculum assessment.

RECOMMENDATIONS

We recommend that MEAP request amendatory legislation or initiate the promulgation of administrative rules to provide a legal basis for enforcing compliance with MEAP HST administration procedures and for monitoring school district test administration.

We also recommend that MEAP revise its MEAP HST Administration Manual to provide for improved test administration by school districts.

AGENCY PRELIMINARY RESPONSE

The Department of Treasury agreed with these recommendations and informed us that the Michigan Merit Award Board has approved a comprehensive MEAP test ethics and administration procedure, which is being promulgated as an administrative rule. This procedure has been distributed to all school districts and will be enforced. Further, the test administration ethics procedure will be incorporated into the MEAP administration manuals.

FINDING

4. MEAP HST Security

MEAP needs to enhance its guidance to school districts regarding security over MEAP HST testing materials to ensure proper control of the materials while in the possession of the school districts. Also, MEAP should obtain and review pertinent data from the MEAP contractor to ensure that the contractor properly accounts for all test booklets.

MEAP provides local school districts with the MEAP HST Administration Manual, which recommends administrator responsibilities. For security over testing materials, the Spring 1999 MEAP HST Administration Manual recommended only that ". . . school districts are to secure testing materials during extended breaks between testing sessions." The Manual did not address other aspects of security over testing materials, such as storage prior to testing, movement of testing materials, or security after the completion of testing.

Our review of security for the spring 1999 test administration at 27 high schools disclosed that 3 (11%) schools did not maintain sufficient security over MEAP HST testing materials. For example, at one building, school district administrators stored the MEAP testing materials in an open and unmonitored location in the main office. At another building, the school district's MEAP administrator distributed the testing materials to the teachers at the beginning of the testing session. The teachers maintained the testing materials until after completing the entire two-week testing session. We observed that at least one teacher stored the testing materials in an unlocked room. At a third building, school building staff instructed a student to transport unused testing booklets between rooms in the building.

Both MEAP and school district administrators informed us that test booklets have been lost while at school districts. MEAP's test administration contract requires the contractor to ensure that all test booklets are returned in a timely manner and to reconcile all test booklets issued, used, and returned. Also, the contractor must contact school districts within three working days after the booklets are due to be returned and immediately notify MEAP of all delinquent school districts. In addition, the contractor is required to submit to MEAP a report on all missing testing materials by school district. MEAP staff informed us that they did not receive a report of missing testing materials from the contractor. Further, in response to our request that MEAP obtain a report of missing testing materials from the contractor, the MEAP director stated that ". . . there will not be additional documentation on the status of missing 'secure' test documents."

Insufficient security over MEAP testing materials could result in the unauthorized use of the materials and also prevent high school building MEAP coordinators from identifying the persons responsible for such improprieties. Also, MEAP's failure to obtain a report of missing test booklets from its contractor severely impedes

MEAP's ability to ensure test security. In addition, ineffective test security could affect the propriety of test results.

RECOMMENDATIONS

We recommend that MEAP enhance its guidance to school districts regarding security over MEAP HST testing materials to ensure proper control of the materials while in the possession of the school districts.

We also recommend that MEAP obtain and review pertinent data from the MEAP contractor to ensure that the contractor properly accounted for all test booklets.

AGENCY PRELIMINARY RESPONSE

The Department of Treasury agreed with these recommendations and informed us that the Michigan Merit Award Board has approved a comprehensive MEAP test ethics and administration procedure, which is being promulgated as an administrative rule. This procedure deals extensively with MEAP test security issues and has been distributed to all schools. Further, pertinent data from MEAP contractors will be reviewed to ensure that a proper accounting is made for all test booklets.

REASONABLENESS OF AND COMPLIANCE WITH TEST DEVELOPMENT AND TEST SCORING PROCEDURES

COMMENT

Audit Objective: To assess the reasonableness of and compliance with test development and test scoring procedures.

Conclusion: We concluded that MEAP generally complied with test development and test scoring procedures. However, our assessment disclosed reportable conditions related to controls over compiling and reporting test results and loss of MEAP records.

FINDING

5. Controls Over Compiling and Reporting Test Results

MEAP had not developed formal MEAP test result quality control procedures and did not fully comply with its informal quality control procedures for the school year 1998-99 grade 5 science test. As a result, MEAP distributed to certain school districts a number of test results that were not accurately compiled.

MEAP's informal quality control procedures for reviewing the compiling and reporting of MEAP test results received from the scoring contractor include the review of score reports, on a sample basis, to detect errors. However, in an effort to expedite the distribution of the school year 1998-99 grade 5 science test results to school districts, MEAP did not follow up on reported fluctuations between preliminary and final scoring classification totals before distributing the results to the school districts.

After distributing the test results, MEAP, in conjunction with its testing contractor, identified a programming error in the scoring process for the grade 5 science test that affected the raw scores of approximately 12,000 (11%) of the approximately 113,400 students who participated in the test. These students attended 34 school districts, one public school academy, and the Michigan School for the Deaf and Blind. The contractor subsequently corrected the programming error, rescored the tests, and distributed the recomputed results to the affected school districts. The rescoring resulted in an improvement in score classification for 795 students.

MEAP's development of and compliance with formal test result quality control procedures would help ensure the detection of scoring errors prior to the distribution of the test results and, therefore, help to ensure the integrity of MEAP.

RECOMMENDATION

We recommend that MEAP develop and fully comply with formal MEAP test result quality control procedures.

AGENCY PRELIMINARY RESPONSE

The Department of Treasury agreed with this recommendation and informed us that a formal quality control procedure is in place and is a part of the assessment contracts. This procedure involves both staff review and review by an independent third party as required.

FINDING

6. Loss of MEAP Records

MEAP should strengthen its management control* to help safeguard MEAP records from accidental disposition.

MEAP management is responsible for establishing and maintaining a system of management control which provides assurance that MEAP assets, such as critical MEAP records, are safeguarded against loss from unauthorized use or disposition.

In preparing for office renovations, MEAP staff filled 40 boxes with MEAP records covering calendar years 1974 through 1998. The records in the boxes included documentation of the history, development, administration, and scoring for the current grades 4 and 7 mathematics tests first administered in school year 1991-92; current grades 4 and 7 reading tests first administered in school year 1989-90; current grades 5 and 8 science and writing tests first administered in school year 1995-96; and the current MEAP HST subjects of mathematics, science, reading, and writing first administered in school year 1995-96.

During our audit, 37 of the 40 boxes of MEAP records were destroyed after Department of Education employees, who were not aware of the contents of the boxes, gave incorrect instructions to the individuals responsible for moving the boxes. As a result of the loss of these records, MEAP administrators could not document the history, development, validation, administration, and scoring of the tests identified in this finding.

RECOMMENDATION

We recommend that MEAP strengthen its management control to help safeguard MEAP records from accidental disposition.

AGENCY PRELIMINARY RESPONSE

The Department of Treasury agreed with this recommendation and informed us that the accidental records disposition occurred in conjunction with the physical relocation of the MEAP offices and will not be repeated.

* *See glossary at end of report for definition.*

OTHER PERTINENT ISSUES

COMMENT

Audit Objective: To assess other pertinent issues related to MEAP.

Conclusion: Our assessment disclosed reportable conditions related to MEAP contract management and MEAP HST testing materials.

FINDING

7. MEAP Contract Management

MEAP needs to improve the management of its contracts.

Department of Management and Budget (DMB) Administrative Guide policy 610 requires that departments manage their contracts in a manner that is fiscally responsible and ensure that vendors meet contractual obligations. To help ensure proper contract management, DMB Administrative Guide procedure 510.08 specifies agency contract management requirements that include maintaining contractor invoices with supporting documentation and performing a post-project evaluation.

The Department of Education entered into a $22.3 million contract for the development, distribution, and scoring of MEAP tests for fiscal years 1995-96 through 1997-98. Periodic contract payments were to be made based on both the actual testing materials provided and the estimated nontesting material services provided for the invoice period.

The Department entered into a $12.2 million contract for MEAP testing materials production and a $14.8 million contract for hand-scoring of constructed response test items* for fiscal years 1998-99 through 2000-01. MEAP estimated the amount of services required from the contractor and based the contract amount on a price-per-service basis. For both of these contracts, periodic contract payments were to be made based on actual services provided for the invoice period.

* *See glossary at end of report for definition.*

Our review of the Department of Education's management of the MEAP contracts disclosed:

a. The Department's periodic payments to the contractors were not based on documented actual services provided as stated in the contracts.

   During fiscal year 1995-96 through the completion of our audit fieldwork, the Department made periodic contract payments from submitted contractor invoices even though the invoices did not contain any detail regarding actual services provided. The Department informed us that the amount and timing of the periodic payments were based on a mutual agreement with the contractor rather than actual services provided. The contract provided that the Department and contractor mutually agree only on the timing of periodic payments. At the end of the contract period, the Department's reconciliation of contract payments with services provided indicated an overpayment to the contractor of approximately $322,000. Compliance with contract provisions and DMB requirements would help the Department ensure the propriety of payments to contractors.

b. The Department did not request a refund of the $322,000 contractor overpayment indicated in part a. of this finding.

   Rather than request a refund of the $322,000 overpayment for the fiscal years 1995-96 through 1997-98 contract, the Department allowed the contractor to keep the overpayment as a credit toward future contract payments. Not recording this overpayment as an advance was in violation of Section 1600.119 of the *Codification of Governmental Accounting and Financial Reporting Standards*, published by the Governmental Accounting Standards Board, which requires the proper matching of MEAP expenditures to the fiscal year in which the services were performed. This overpayment resulted in the financial reporting misstatement of MEAP expenditures in fiscal years 1997-98 and 1998-99.

c. The Department did not prepare a post-project evaluation for the completed contract.

   DMB Administrative Guide procedure 510.08 requires that, prior to final payment on the contract, the contract administrator prepare a post-project

evaluation and provide a copy to the department procurement office to document the achievement of the objectives of the project or services. The Department informed us that it was unaware of the requirement to prepare post-project evaluations. Post-project evaluations help ensure that expectations associated with a service are fulfilled in a responsible manner.

d. The Department amended the scope of its MEAP contract to include services for MMASP without proper approval.

DMB Administrative Guide procedure 510.08 states that contract administrators do not have the authority to negotiate changes, modifications, amendments, or otherwise alter the terms, conditions, prices, or specifications of a contract. The procedure states that only DMB has this authority. In addition, Department of Civil Service approval is required if proposed contract changes result in changes in conditions cited in the previous contracts.

In August 1999, MMASP administrators at the Department of Treasury requested that the Department of Education instruct the contractor to perform additional services for MMASP under the existing MEAP contract. As of September 15, 1999, the contractor had provided services totaling approximately $164,000 under the MEAP contract for MMASP. These services were performed without obtaining the required DMB and Department of Civil Service approvals for amending the MEAP contract for the additional services.

Proper contract management would help to ensure the propriety of the programmatic and fiscal aspects of the MEAP contracts.

RECOMMENDATION

We recommend that MEAP improve the management of its contracts.

AGENCY PRELIMINARY RESPONSE

The Department of Treasury agreed with this recommendation and informed us that contract administration practices and procedures have been reviewed and revised.

FINDING

8. MEAP HST Testing Materials

MEAP needs to develop a more accurate method for determining the number of MEAP HST testing material sets needed by school districts.

Each student taking the MEAP HST requires a set of testing materials. Each set consists of 5 separate test booklets, corresponding answer documents, mathematics overlay sheets, mathematics reference sheets, and core democratic values sheets. To determine the number of testing material sets needed by school districts, MEAP generally used the prior year grade 11 student head count plus an additional 5%. However, MEAP also allowed school districts to determine a different number of testing material sets needed.

Our review of the MEAP HST disclosed that school districts did not use a large percentage of testing material sets distributed to them. Statewide, during school years 1998-99 and 1997-98, school districts received approximately 165,000 and 171,000 testing material sets, respectively, from the contractor. However, during school years 1998-99 and 1997-98, the school districts used only approximately 81,000 (49%) and 82,000 (48%), respectively, of the testing material sets distributed. The school districts returned these unused sets to the contractor at MEAP expense. Also, approximately one half of the school districts received more than 150% of their school year 1997-98 grade 11 student head count.

The cost of these unused testing material sets during fiscal years 1998-99 and 1997-98, at $2.07 and $1.21 per set, was approximately $174,000 and $108,000, respectively, not including the cost of shipping the excess sets to and from the school districts.

We recognize the importance of providing school districts with a sufficient number of testing materials to meet their needs. However, a method to accurately determine the needs of school districts would result in MEAP savings and, therefore, improve MEAP efficiency. One alternative would be to have students preregister to participate in the test as is required by a number of national standardized testing programs. In addition to reducing MEAP costs, preregistering would also assist schools in planning and providing appropriate testing facilities and monitors. Further, preregistration and parent notification could increase scholarship awareness and MEAP HST participation.

RECOMMENDATION

We recommend that MEAP develop a more accurate method for determining the number of MEAP HST testing material sets needed by school districts.

AGENCY PRELIMINARY RESPONSE

The Department of Treasury agreed with this recommendation and informed us that the Michigan Merit Award Board has approved a comprehensive MEAP test ethics and administration procedure, which will be promulgated as an administrative rule. This procedure deals with the issue of MEAP testing materials management and control and has been distributed to all school districts.

SUPPLEMENTAL INFORMATION

UNAUDITED
Exhibit

MICHIGAN EDUCATIONAL ASSESSMENT PROGRAM
District Visits
Grade 11 Students' Participation Rate*
in the MEAP HST for High Schools Visited
For School Years 1996-97 through 1998-99

School Building Visited	School Year 1998-99		School Year 1997-98		School Year 1996-97	
	Participation Rate	Grade 11 Enrollment	Participation Rate	Grade 11 Enrollment	Participation Rate	Grade 11 Enrollment
1	26%	329	55%	297	86%	306
2	66%	300	52%	325	63%	363
3	71%	272	42%	237	92%	219
4	58%	71	51%	85	72%	77
5	8%	397	20%	403	82%	338
6	59%	202	66%	182	72%	198
7	47%	227	51%	243	57%	250
8	66%	309	78%	263	66%	296
9	62%	317	63%	289	64%	257
10	64%	647	25%	654	96%	602
11	102%	309	61%	308	81%	296
12	83%	380	72%	401	84%	420
13	57%	212	36%	199	96%	225
14	83%	347	16%	343	89%	311
15	37%	463	66%	450	87%	417
16	75%	241	73%	264	65%	271
17	86%	233	93%	241	93%	220
18	56%	386	51%	370	75%	387
19	57%	419	24%	441	86%	403
20	81%	315	72%	376	82%	355
21	77%	187	60%	234	70%	266
22	90%	177	92%	167	92%	203
23	40%	491	25%	480	90%	478
24	63%	167	28%	192	83%	193
25	77%	130	70%	149	84%	146
26	72%	254	70%	200	80%	194
27	85%	375	79%	366	81%	387
Statewide Average	68%		65%		83%	

Source: Department MEAP HST participation data.

* Participation rate is the compilation of the average student participation in the subject area assessments for mathematics, science, reading, and writing for school years 1996-97 and 1997-98. For school year 1998-99, the average also includes student participation in the new social studies assessment.

Glossary of Acronyms and Terms

constructed response test item	An exercise for which examinees must create their own response rather than choosing a response from an enumerated set. Short-answer items require a few words or a number as an answer, whereas extended-response items require at least a few sentences.
criterion-referenced test	A test where an individual's performance is compared to a specific learning objective or performance standard and not to the performance of other students. In criterion-referenced tests, it is possible that none, or all, of the examinees will reach a particular goal or performance standard.
DMB	Department of Management and Budget.
effectiveness	Program success in achieving mission and goals.
efficiency	Achieving the most outputs and outcomes practical for the amount of resources applied or minimizing the amount of resources required to attain a certain level of outputs or outcomes.
goals	The agency's intended outcomes or impacts for a program to accomplish its mission.
high school	A school usually including grades 9 through 12 or 10 through 12.
management control	The management control environment, management information system, and control policies and procedures established by management to provide reasonable assurance that goals are met; that resources are used in compliance with laws and regulations; and that valid and

reliable performance related information is obtained and reported.

material condition — A serious reportable condition that could impair the ability of management to operate a program in an effective and efficient manner and/or could adversely affect the opinion of an interested person concerning the effectiveness and efficiency of the program.

Michigan Educational Assessment Program (MEAP) — Statewide standardized curricula-specific tests given to students in certain grade levels designed to measure selected essential performance objectives. MEAP for high school students has recently undergone changes because of 1997 legislation and was renamed the Michigan Educational Assessment Program High School Test (MEAP HST).

Michigan Educational Assessment Program High School Test (MEAP HST) — Title of the high school MEAP assessment administered after 1997 (subsequent to the High School Proficiency Test [HSPT]).

Michigan Merit Award Scholarship Program (MMASP) — A scholarship program established by the Michigan Merit Award Scholarship Act (Act 94, P.A. 1999).

middle school — A school usually including grades 5 through 8 or 6 through 8.

mission — The agency's main purpose or the reason that the agency was established.

performance audit — An economy and efficiency audit or a program audit that is designed to provide an independent assessment of the performance of a governmental entity, program, activity, or function to improve public accountability and to facilitate decision making by parties responsible for overseeing or initiating corrective action.

postsecondary	Education level beyond high school.
reliability	A measure that indicates whether a specific test, when administered on different occasions, will produce the same test results.
reportable condition	A matter coming to the auditor's attention that, in the auditor's judgment, should be communicated because it represents either an opportunity for improvement or a significant deficiency in management's ability to operate a program in an effective and efficient manner.
school district	A local school district.
Technical Advisory Committee	A subset of six core panel members selected to serve in an advisory capacity during test development and implementation.
validity	A measure that indicates whether the test is really measuring what it was designed to measure. Validity refers to the degree of appropriateness, meaningfulness, and usefulness of the specific inferences made from the test scores.