



# MICHIGAN

OFFICE OF THE AUDITOR GENERAL

## AUDIT REPORT



THOMAS H. MCTAVISH, C.P.A.  
AUDITOR GENERAL

“...The auditor general shall conduct post audits of financial transactions and accounts of the state and of all branches, departments, offices, boards, commissions, agencies, authorities and institutions of the state established by this constitution or by law, and performance post audits thereof.”

– Article IV, Section 53 of the Michigan Constitution

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Michigan  
*Office of the Auditor General*  
**REPORT SUMMARY**

*Performance Audit*  
*High School Graduation and Dropout Rates*  
*Center for Educational Performance and*  
*Information*  
*Department of Management and Budget*

Report Number:  
07-181-05

Released:  
September 2006

*Federal, State, and local educational agencies have identified high school graduation and dropout rates as one of the key indicators of school performance and student success. The Center for Educational Performance and Information (CEPI) is responsible for calculating an annual graduation and dropout rate for each high school, each district, and the State in compliance with nationally recognized standards.*

***Audit Objective:***

To assess the accuracy of high school graduation and dropout data used by CEPI in its calculation process.

***Audit Conclusion:***

We concluded that high school graduation and dropout data used by CEPI in its calculation process was not accurate. Our assessment disclosed three material conditions related to verification of data accuracy, data evaluation and validation, and correction of Single Record Student Database (SRSD) data (Findings 1 through 3).

***Material Conditions:***

CEPI did not have the authority to review high schools' records and the authority to withhold State aid payments for inaccurate reporting or for failure to report graduation and dropout data (Finding 1).

CEPI had not developed sufficient reasonableness checks and verification techniques to help identify inaccuracies in

high school graduation and dropout data prior to using the data to calculate graduation and dropout rates (Finding 2).

CEPI had not developed procedures to correct errors in SRSD data submitted by high schools (Finding 3).

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***Audit Objective:***

To evaluate the effectiveness of CEPI's process for calculating high school graduation and dropout rates.

***Audit Conclusion:***

We concluded that CEPI's process for calculating high school graduation and dropout rates was moderately effective. We noted reportable conditions related to detection of computer program errors and training and instruction for high schools (Findings 4 and 5).

***Reportable Conditions:***

CEPI had not developed sufficient edit checks and error reports to ensure that its

computer programs were executing properly (Finding 4).

CEPI did not provide high schools with sufficient detailed instructions regarding reporting requirements for migrant education students and midterm promotions. Also, CEPI should develop alternative training and instruction methods to address significant data quality issues that exist at the high schools. (Finding 5)

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**Agency Response:**

Our audit report contains 5 findings and 6 corresponding recommendations. CEPI indicated that it agrees with all 6 recommendations and will comply with them.

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A copy of the full report can be obtained by calling 517.334.8050 or by visiting our Web site at: <http://audgen.michigan.gov>



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September 28, 2006

Ms. Mary A. Lannoye, State Budget Director  
Office of the State Budget  
Department of Management and Budget  
George W. Romney Building  
Lansing, Michigan

Dear Ms. Lannoye:

This is our report on the performance audit of High School Graduation and Dropout Rates, Center for Educational Performance and Information, Department of Management and Budget.

This report contains our report summary; background; audit objectives, scope, and methodology and agency responses; comments, findings, recommendations, and agency preliminary responses; four tables, 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 agency'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.

AUDITOR GENERAL



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CENTER FOR EDUCATIONAL PERFORMANCE AND INFORMATION  
DEPARTMENT OF MANAGEMENT AND BUDGET**

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## Background

Federal, State, and local educational agencies have identified high school graduation and dropout rates as one of the key indicators of school performance and student success. The Center for Educational Performance and Information (CEPI) is responsible for collecting data from high schools and calculating an annual graduation and dropout rate for each high school, each district, and the State in compliance with nationally recognized standards. CEPI is also responsible for annually reporting the rates to the Legislature, the State Budget Director, and the Michigan Department of Education (MDE). MDE is required to report Statewide graduation rates to the U.S. Department of Education (USDOE) in its annual State Report Card as part of the federal No Child Left Behind (NCLB) Act of 2001\* requirements. In addition, MDE reports graduation and dropout data to the USDOE National Center for Educational Statistics\* (NCES).

The NCLB Act of 2001 defines graduation rates as the percentage of students who graduate from a secondary school with a regular diploma in a standard number of years. The NCLB Act definition requires states to measure the graduation rate by following an individual student's progress over a four-year period. Michigan does not have data collected by individual student that would allow a calculation based on that student's progress over a four-year period. As a result, Michigan has obtained approval from the USDOE to use an estimated graduation rate calculation method until it can phase in the federal calculation. During our audit period, the State School Aid Act required CEPI to compute this graduation rate by compiling the activity of all students in the high school (grades 9 through 12) for a one-year period, excluding migrant, adult education, and alternative education students. The students in each grade remaining in school for the one-year period are considered to be representative of the school's students that would graduate over a four-year period.

Michigan also uses the graduation rate as a component in assessing if high schools have achieved adequate yearly progress\* (AYP). If a high school achieves a graduation rate of 80% and meets certain testing requirements, it is considered to have achieved AYP. If it does not meet these minimum requirements, the high school is subject to varying phases of school improvement plans that include providing transportation for

\* See glossary at end of report for definition.

students to attend another school, offering supplemental services, and developing and implementing restructuring plans.

The State calculates its annual dropout rate based on those students who are not accounted for in the graduation rate calculation as a graduate, a transfer student (transferred in or out of district), a retained student, or a continuing student as of the fall student count.

CEPI relies on the high schools to report the data necessary to calculate graduation and dropout rates. Prior to school year\* 2002-03, graduation and dropout data was summarized by high schools on the pupil headcount report screen and submitted electronically through the Education Data Network\* (EDN). In this database, school districts reported to CEPI the total number of students enrolled, graduating, transferring, and retained in grade. The number of dropouts was automatically calculated based on the information provided via EDN. Beginning with school year 2002-03, CEPI began collecting data related to individual students in the Single Record Student Database (SRSD). CEPI planned to use the approved estimation methodology and the data submitted by high schools in SRSD to calculate the graduation and dropout rates beginning with school year 2002-03. However, CEPI determined that the data in SRSD was not of sufficient quality to calculate accurate graduation and dropout rates for school years 2002-03 and 2003-04. Therefore, CEPI allowed school districts an opportunity to review and modify the data in EDN. CEPI used the modified data submitted via the pupil head count report screen in EDN to calculate graduation and dropout rates for school years 2002-03 and 2003-04 (see Table 1, presented as supplemental information). CEPI informed us that it plans to continue to use SRSD data as a basis to calculate graduation and dropout rates for future school years.

CEPI reported Statewide graduation rates of 84.8% and 88.7% for school years 2002-03 and 2003-04, respectively. CEPI reported Statewide dropout rates of 4.1% and 3.0% for school years 2002-03 and 2003-04, respectively.

CEPI is organizationally placed within the Office of the State Budget, Department of Management and Budget. In addition to calculating and reporting graduation and dropout rates, CEPI collects and reports on other data required by State and federal law about the performance of Michigan's K-12 public schools and students. For example, CEPI collects school districts' data related to student demographics and performance,

\* See glossary at end of report for definition.

school personnel demographics and qualifications, and individual school finances and safety. Educators, parents, and policymakers at the federal, State, and local levels utilize the information and reports to assess the academic, operational, and financial performance of Michigan's schools. CEPI expended \$3 million during fiscal year 2004-05 and had 13 employees as of September 30, 2005.

## Audit Objectives, Scope, and Methodology and Agency Responses

### Audit Objectives

Our performance audit\* of High School Graduation and Dropout Rates, Center for Educational Performance and Information (CEPI), Department of Management and Budget, had the following objectives:

1. To assess the accuracy of high school graduation and dropout data used by CEPI in its calculation process.
2. To evaluate the effectiveness of CEPI's process for calculating high school graduation and dropout rates.

### Audit Scope

Our audit scope was to examine the Center for Educational Performance and Information's activities, processes, and records related to calculating and reporting high school graduation and dropout rates. 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.

### Audit Methodology

Our audit procedures, conducted from March 2005 through January 2006, included a review of CEPI's records and procedures for the period July 1, 2003 through June 30, 2005 and high schools' records related to graduation and dropout rates for school years 2002-03 and 2003-04.

Our methodology included a preliminary review of CEPI's operations to gain an understanding of its process and the source of the data used for CEPI's calculation of high school graduation and dropout rates. This included a review of applicable federal and State laws and regulations; CEPI policies and procedures; and other information, including correspondence with local educational agencies.

\* See glossary at end of report for definition.

To accomplish our first objective, we recalculated the Statewide graduation and dropout rates using the final graduation and dropout summary data submitted via the Education Data Network (EDN). We verified whether the reported graduation and dropout rates included all required high schools and agreed with the graduation and dropout rates calculated by CEPI.

We visited 10 high schools and compared the high schools' records to the summary of final graduation and dropout data submitted to CEPI by the high schools. We recalculated the high schools' graduation and dropout rates using supporting documentation available at the high schools and Statewide data available in the Single Record Student Database (SRSD).

We used data from the fall 2004 SRSD submission to define our population of high schools and to select the high schools to visit. We excluded public school academies and high schools with less than 50 students. We categorized the high schools into 4 groups by the number of students enrolled at the school. We selected 3 high schools from each of the 2 larger groups and 2 high schools from each of the 2 smaller groups. For the 2 larger groups, we selected 1 high school that exceeded the 80% graduation rate needed to achieve adequate yearly progress (AYP) in school year 2002-03, 1 high school that was close to the 80% graduation rate needed to achieve AYP in school year 2002-03, and 1 high school that was below the 80% graduation rate needed to achieve AYP in school year 2002-03. For the 2 smaller groups, we selected 1 high school that exceeded the 80% graduation rate needed to achieve AYP in school year 2002-03 and 1 high school that did not exceed the 80% graduation rate needed to achieve AYP in school year 2002-03. We sampled SRSD data for the 10 high schools visited and verified selected information to determine if the information in SRSD was accurate and reliable.

To accomplish our second objective, we reviewed the process used to calculate the graduation and dropout rates for school years 2002-03 and 2003-04, including the data used, the methodology used, verification and correction of data elements, and reporting of data. We compared CEPI's process with federal regulation and State statute requirements for graduation and dropout rate calculations. We reviewed CEPI's process to analyze the graduation and dropout data elements and its efforts to ensure the validity of the data elements. We compared the summarized graduation and dropout data from SRSD with the final totals reported by school districts using EDN to identify the extent of data inconsistencies. We reviewed CEPI's and the Michigan

Department of Education's efforts to verify the accuracy of graduation data. We compared our audited graduation rates from the first objective with CEPI's calculated rates.

#### Agency Responses

Our audit report contains 5 findings and 6 corresponding recommendations. CEPI's preliminary response indicated that it agrees with all 6 recommendations and will comply with them.

The agency preliminary response that follows each recommendation in our audit report was taken from the agency'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 Management and Budget to develop a formal response to our audit findings and recommendations within 60 days after release of the report.

COMMENTS, FINDINGS, RECOMMENDATIONS,  
AND AGENCY PRELIMINARY RESPONSES

## ACCURACY OF HIGH SCHOOL GRADUATION AND DROPOUT DATA USED BY CEPI

### COMMENT

**Audit Objective:** To assess the accuracy of high school graduation and dropout data used by the Center for Educational Performance and Information (CEPI) in its calculation process.

**Conclusion:** We concluded that high school graduation and dropout data used by CEPI in its calculation process was not accurate. Our assessment disclosed three material conditions\* related to verification of data accuracy, data evaluation and validation, and correction of Single Record Student Database (SRSD) data (Findings 1 through 3).

### FINDING

#### 1. Verification of Data Accuracy

CEPI did not have the authority to review high schools' records and the authority to withhold State aid payments for inaccurate reporting or for failure to report graduation and dropout data. Therefore, CEPI could not verify the accuracy of the data used in its calculation of graduation and dropout rates. As a result, federal agencies, the Legislature, the Michigan Department of Education (MDE), local school districts, and parents that use this data to make education policy decisions and to evaluate individual schools' performance as well as the overall quality of education in Michigan cannot be assured that their decisions are based on accurate information.

Section 388.1694a of the *Michigan Compiled Laws* provides that CEPI and its advisory committee\* should develop, establish, and maintain a process to ensure the validity, reliability, and accuracy of the data collected. On a test basis, CEPI should compare the collected data with source documentation retained at the high schools to ensure its accuracy and supplement this comparison with other reasonableness checks and verification techniques (Finding 2). Although MDE has the authority to review high schools' records and withhold State aid payments, it does not review these records to verify the accuracy of graduation and dropout data collected by CEPI or withhold State aid payments for inaccurate reporting or

\* See glossary at end of report for definition.

for failure to report graduation and dropout data. Consequently, there is no verification of the accuracy of data collected from the high schools at the State level.

We visited 10 high schools and reviewed supporting documentation related to the graduation and dropout data submitted by those high schools. We noted varying degrees of inaccurate reporting of this data at all 10 high schools (see Tables 2 and 3, presented as supplemental information). We noted errors in CEPI's calculated and reported graduation rates that ranged from a 0.6% overstatement (most accurate) to a 37.5% understatement (least accurate). In addition, one high school did not submit data to CEPI for school year 2003-04, prohibiting CEPI from calculating and reporting a graduation rate. Based on our audit, we calculated an 81.6% graduation rate for that high school. We also noted errors in CEPI's reported dropout rates that ranged from a 0.1% understatement (most accurate) to a 13.3% overstatement (least accurate) for the two school years reviewed.

In addition, MDE used the inaccurate graduation rates as a component in assessing if these high schools achieved adequate yearly progress (AYP). If a high school achieves a graduation rate of 80% and meets certain testing requirements, it is considered to have achieved AYP. We noted that 1 high school's graduation rate computed by CEPI met the 80% requirement; however, our review disclosed that the graduation rate for this high school did not meet the 80% requirement for school year 2003-04 (see school 6 in Table 2). We also noted that the graduation rate computed by CEPI for 2 high schools for school year 2002-03 and 2 high schools for school year 2003-04 did not meet the 80% requirement; however, our review disclosed that the high schools' graduation rates did meet the 80% requirement (see schools 4 and 7 and schools 2 and 4, respectively, in Table 2). If a high school does not meet the AYP requirements, the high school could be subject to varying phases of school improvement plans that include providing transportation for students to attend another school, offering supplemental services, and developing and implementing restructuring plans.

## **RECOMMENDATION**

We recommend that CEPI seek the authority to review high schools' records and the authority to withhold State aid payments for inaccurate reporting or for failure to report graduation and dropout data.

## **AGENCY PRELIMINARY RESPONSE**

CEPI agrees with the recommendation and will seek legislative authorization to incorporate the auditing of graduation and dropout rate data into the auditing of local districts already done by intermediate districts. CEPI informed us that it will work with MDE to develop and communicate guidelines for school districts defining the circumstances for which payments will be withheld. Also, CEPI informed us that it will notify MDE of districts that have failed to report data or have reported inaccurate data so that MDE can withhold State aid payments.

CEPI informed us that Michigan, like most other states, has historically used aggregated data from school districts to compile graduation and dropout rates. Also, CEPI informed us that various governmental agencies concerned with graduation and dropout rates believe that there are inherent problems in that approach; many of those problems were identified in this audit. In 2002, CEPI began to collect data to compute graduation and dropout rates by tracking individual students over time (rather than using aggregated data). This audit was conducted while CEPI was in the process of collecting that data. This new methodology requires five years of data and CEPI informed us that it will be used to calculate graduation and dropout rates for the class of 2007. Because the new methodology will be based on individual student records, CEPI believes that it will be more accurate than the current methodology and that it should address many of the problems identified in this audit. CEPI informed us that Michigan will be one of the first states to use an individual student tracking methodology as recommended by the National Governors Association (NGA) Graduation Counts Compact.

## **FINDING**

### **2. Data Evaluation and Validation**

CEPI had not developed sufficient reasonableness checks and verification techniques to help identify inaccuracies in high school graduation and dropout data prior to using the data to calculate graduation and dropout rates. As a result, CEPI did not detect inaccuracies in the data submitted by high schools. These types of analyses, in conjunction with comparing the collected data with source documentation retained at high schools (Finding 1), would also help identify inaccurate data that should be investigated prior to using it in the calculation of graduation and dropout rates.

Section 388.1694a of the *Michigan Compiled Laws* provides that CEPI and its advisory committee should develop, establish, and maintain a process to ensure the validity, reliability, and accuracy of the data collected.

We performed some Statewide analyses and identified high schools that reported inaccurate information. In addition, we noted high schools that reported data that was not reasonable, schools with significant fluctuations in rates between school years, and instances in which CEPI could assist schools in verifying the status of unknown students. For example:

- a. CEPI did not verify that high schools reporting 100% graduation rates did not also report students who dropped out. A high school cannot have a 100% graduation rate if it has students who dropped out during the school year and who did not return before the fall student count date.

We determined that 43 (6.8%) of 632 and 50 (8.0%) of 623 high schools reported 100% graduation rates in school years 2002-03 and 2003-04, respectively. We analyzed the students' status for the high schools that reported 100% graduation rates and determined that 29 (67.4%) of the 43 and 26 (52.0%) of the 50 schools that reported 100% graduation rates also reported students who were dropouts for school years 2002-03 and 2003-04, respectively. Therefore, CEPI reported overstated graduation rates and understated dropout rates to the Legislature and MDE for these 29 schools in school year 2002-03 and 26 schools in school year 2003-04.

- b. CEPI did not perform analyses to identify high schools with significant increases or decreases in graduation or dropout rates from the previous year. A significant increase or decrease could indicate that the high school had errors in data submissions.

We compared the school year 2002-03 and 2003-04 graduation and dropout rates for all high schools. We identified 106 (17.1%) of 619 graduation rates and 14 (2.3%) of 619 dropout rates that increased or decreased by 10% or more between the two years. For example, 1 high school reported a decrease of 38.6% in its graduation rate from school year 2002-03 to school year 2003-04. We determined that the high school's 2003-04 graduation rate should have decreased by only 1.1% compared with the 2002-03 reported

graduation rate (see school 2 in Table 2, presented as supplemental information).

- c. CEPI did not routinely perform Statewide record searches to determine if students reported as dropouts were attending another high school and to verify that students reported as transferring to another high school were accounted for by the other high school. This type of verification would help to provide more accurate graduation and dropout rates.

For 10 high schools, we reviewed Statewide SRSD data to verify that students who were reported as transfers out to another Michigan school district were attending another high school and that students reported as dropouts were not attending another high school. All 10 high schools had reported transfer students who were not reported as attending school in another Michigan school district. For example, one high school reported 39 (22.0%) of 177 and another high school reported 8 (13.1%) of 61 students as transfers out who were not reported as attending another high school for school year 2003-04. Therefore, these students may have been dropouts, which would lower the high schools' graduation rates and increase the dropout rates.

CEPI informed us that its computer system is inadequate to complete a Statewide analysis for all school districts. In addition, CEPI indicated that although high schools could input individual student information to verify the transfer of a selected student, they could not conduct a Statewide search for all transfer students, simultaneously. During our audit period, CEPI performed a Statewide match for one large school district to identify students with unknown status. As a result, that district reported a graduation rate increase of 16.4% from school year 2002-03 to school year 2003-04. Because CEPI was able to determine the status of unknown students, the district was able to report more accurately its transfers and dropouts. Therefore, CEPI should complete this analysis for school districts that have a significant number of students reported as unknown, dropouts, or transfers.

- d. CEPI had not developed automated reasonableness checks of the SRSD data input by the high schools. Reasonableness checks could be added to compare the number of graduates or dropouts reported on SRSD with the

number of students enrolled or with the prior years' number of graduates or dropouts reported.

We noted that 80 (12.7%) of 632 and 18 (2.9%) of 623 high schools submitted zero graduates in SRSD for school years 2002-03 and 2003-04, respectively. In addition, we noted that 55 (8.7%) of 632 and 21 (3.4%) of 623 high schools submitted an unreasonable number of graduates compared with the enrollments for school years 2002-03 and 2003-04, respectively.

Although the data shows improvement from one year to the next, automated reasonableness checks could improve the data quality by providing notification to the high schools of potential problems for follow-up and resolution prior to submission of the data to CEPI.

CEPI informed us that it is aware of these system limitations and plans to implement system improvements. CEPI also informed us that data accuracy is a shared responsibility between the high schools and CEPI.

### **RECOMMENDATION**

We recommend that CEPI develop reasonableness checks and verification techniques to help identify inaccuracies in high school graduation and dropout data prior to using the data to calculate graduation and dropout rates.

### **AGENCY PRELIMINARY RESPONSE**

CEPI agrees with the recommendation and informed us that, per the National Center for Educational Statistics (NCES) Forum Guide to Building a Culture of Quality Data, data quality is a shared responsibility between the State and school districts/buildings, beginning with data entry at the local level. CEPI also informed us that it is in the process of approving a contract for upgrading the SRSD collection software. These upgrades will include numerous electronic checks to help districts identify data problems before the data is submitted to CEPI. In addition, CEPI informed us that it will continue to seek additional resources from the Legislature to implement a longitudinal Decision Support System. Such a longitudinal data system will allow school districts to validate their data by comparing it with prior year submissions before submitting their official data to CEPI. CEPI informed us that the Legislature has not approved its full requests for additional funding for either fiscal year 2005-06 or fiscal year 2006-07.

## **FINDING**

### **3. Correction of SRSD Data**

CEPI had not developed procedures to correct errors in SRSD data submitted by high schools. As a result, CEPI reported inaccurate data to NCES.

NCES is the primary federal entity for collecting, analyzing, and reporting data related to education in the United States. NCES activities are designed to address high priority education data needs; to provide consistent, reliable, complete, and accurate indicators of education status and trends; and to report timely, useful, and high-quality data to the U.S. Department of Education, the Congress, the states, other education policymakers, practitioners, data users, and the general public. Because CEPI provided inaccurate data to NCES, the users of NCES data may incorrectly assess Michigan's graduation and dropout rates.

Section 388.1694a(1)(c) of the *Michigan Compiled Laws* requires CEPI to establish procedures to ensure the validity and reliability of the data collected and the collection process.

A high school cannot correct data after it is submitted to CEPI because SRSD does not have this functionality. For school years 2002-03 and 2003-04, CEPI determined that the original data provided by high schools through the SRSD submission process was not accurate and could not be used to calculate the graduation and dropout rates. Therefore, CEPI implemented a process to re-collect the data through a different system called the Education Data Network (EDN). CEPI then used the data collected through EDN to calculate Michigan's graduation and dropout rates.

NCES required the submission of graduation and dropout data before CEPI had completed the data re-collection process, but NCES also allowed for correction of the data after CEPI had re-collected the data from high schools. CEPI did not resubmit the corrected data because it had not collected the dropout data in a format that was acceptable to NCES. However, CEPI could have submitted the re-collected graduation data to NCES because that data was collected in a format permitted by NCES. CEPI informed us that it decided to submit both graduation and dropout data from the same source (SRSD) to avoid duplication or inconsistency of data. As a result, the data submitted to NCES was not from the

data source used by CEPI to compute the graduation and dropout rates submitted to the Legislature and MDE.

We compared the number of graduates and dropouts that CEPI used to calculate Michigan's graduation and dropout rates with the number of graduates and dropouts that CEPI submitted to NCES. We noted:

- a. CEPI underreported 18,965 (18.9%) of 100,301 and 6,763 (6.8%) of 98,819 students as graduates to NCES for school years 2002-03 and 2003-04, respectively. However, CEPI considered these students to be graduates for its calculation of Michigan's school year 2002-03 and 2003-04 graduation rates. Therefore, anyone utilizing NCES as a source to analyze Michigan's graduation rates would compute lower graduation rates than CEPI calculated and reported to the Legislature and MDE.
- b. CEPI overreported 6,868 (26.3%) of 26,112 and 10,654 (43.7%) of 24,372 students as dropouts to NCES for school years 2002-03 and 2003-04, respectively. However, CEPI did not consider these students to be dropouts in its calculation of Michigan's school year 2002-03 and 2003-04 dropout rates. Therefore, anyone utilizing NCES as a source of data to analyze Michigan's dropout rates would compute higher dropout rates than CEPI calculated and reported to the Legislature and MDE.

### **RECOMMENDATION**

We recommend that CEPI develop procedures to correct errors in SRSD data submitted by high schools.

### **AGENCY PRELIMINARY RESPONSE**

CEPI agrees with the recommendation and will continue to add electronic error corrections as part of the upgrade of the SRSD collection software.

CEPI informed us that it is in the process of collecting data to implement a new four-year cohort graduation rate, beginning with the graduating class of 2007. This first four-year cohort rate requires five years of historical student-level data and will be calculated in spring/summer 2008. Full implementation depends on the ability to track the movement of students over time, along with the ability to correct individual-level data. CEPI informed us that tracking a cohort of students over time

(e.g., through high school) efficiently and accurately requires the warehousing functionality of the Decision Support System and this effort is contingent upon the Legislature enacting sufficient funding.

CEPI informed us that, within the past two years, it has done all of the following to assist districts in correcting student data errors:

- Deployed a new application that includes warnings when incongruent data is submitted (e.g., a reported 100% graduation rate accompanied by dropouts), when calculated rates are significantly above or below the building's prior year rates, and when no graduates are submitted.
- Created error reports to help districts identify data problems.
- Developed a series of Web-based reports that allow districts to review the data that has been electronically submitted to CEPI.

In addition, to further assist districts and schools in locating unaccounted for students reported by other districts, CEPI informed us that it piloted a Statewide individual student record search with a single district and then fully deployed this functionality to all districts for school year 2004-05 graduation and dropout calculations.

## **EFFECTIVENESS OF CEPI'S PROCESS FOR CALCULATING HIGH SCHOOL GRADUATION AND DROPOUT RATES**

### **COMMENT**

**Audit Objective:** To evaluate the effectiveness of CEPI's process for calculating high school graduation and dropout rates.

**Conclusion:** We concluded that CEPI's process for calculating high school graduation and dropout rates was moderately effective. We noted reportable conditions\* related to detection of computer program errors and training and instruction for high schools (Findings 4 and 5).

\* See glossary at end of report for definition.

## **FINDING**

### **4. Detection of Computer Program Errors**

CEPI had not developed sufficient edit checks and error reports to ensure that its computer programs were executing properly. As a result, CEPI provided high schools with inaccurate summaries of transfers in and out, which contributed to the inaccurate calculation and reporting of graduation and dropout rates for 55 high schools for school year 2002-03.

Control Objectives for Information and Related Technology\* (COBIT) requires an organization to establish procedures to ensure that data processing validation, authentication, and editing are performed. In February 2005, the Department of Information Technology formally adopted COBIT to assist management in ensuring that a security and internal control system or framework was in place for the State of Michigan's information technology environment.

CEPI informed us that it performed some analysis and found data quality issues with the SRSD data submitted by high schools. In an effort to increase the accuracy of the calculated and reported rates, CEPI re-collected the data from high schools. To facilitate the re-collection, CEPI summarized SRSD enrollments, transfers, and graduates as submitted by high schools and provided high schools with the aggregated total for review and modification (see Table 4, presented as supplemental information). However, when CEPI provided the aggregated school year 2002-03 transfers in and out data to high schools for modification, its computer program populated the results in the incorrect field (e.g., transfers in for the class of 2005 were reported as transfers in for the class of 2006). Based on our analysis, 55 (8.7%) of 632 high schools did not make any adjustments to the summarized SRSD transfers in and out. Because the schools did not adjust the inaccurate data, it is likely that the graduation and dropout rates are inaccurate for those high schools.

CEPI informed us that the computer program used to populate EDN did not execute properly. CEPI indicated that the initial testing of the computer program and review of the data prior to providing it to high schools did not identify this problem.

\* See glossary at end of report for definition.

## **RECOMMENDATION**

We recommend that CEPI develop sufficient edit checks and error reports to ensure that its computer programs are executing properly.

## **AGENCY PRELIMINARY RESPONSE**

CEPI agrees with the recommendation and informed us that it corrected the specifically noted error for school year 2003-04 and subsequent years.

Also, CEPI informed us that it is in the process of establishing pilot testing protocols with school districts to test application software, queries, and reports before they are fully deployed. In addition, CEPI has put processes in place to review student count data with the Office of the State Budget staff responsible for monitoring pupil memberships as an additional reasonableness check.

## **FINDING**

### 5. **Training and Instruction for High Schools**

CEPI did not provide high schools with sufficient detailed instructions regarding reporting requirements for migrant education students and midterm promotions. Also, CEPI should develop alternative training and instruction methods to address significant data quality issues that exist at the high schools. Training and instruction would help to ensure that high schools submit accurate data in both SRSD and EDN.

Section 388.1694a of the *Michigan Compiled Laws* requires CEPI to develop State and model local data collection policies and its advisory committee to provide advice to CEPI regarding management of CEPI's data collection activities, including procedures for the efficient and accurate transmission and collection of data. We noted:

- a. CEPI's instructions for reporting migrant students were not clear. As a result, we noted that the one high school we visited with a migrant student population incorrectly included migrant students in its total number of graduates. CEPI's instructions did not inform schools that CEPI had included migrant students as graduates but had not included migrant students in the enrollments. In addition, CEPI did not instruct schools in how to adjust the enrollments or graduates for the graduation and dropout rate calculations. Because CEPI's

instructions did not detail the process to accurately report migrant students, it is possible that other high schools also reported migrant students incorrectly. This situation contributed to the inaccurate graduation and dropout calculations for the one high school that we visited with a migrant student population (see school 10 in Tables 2 and 3, presented as supplemental information).

- b. CEPI's instructions for reporting students who were promoted at midterm did not detail the process to retain these students when they had not earned enough credits to continue to the next grade level at the end of the year. We noted that 2 of the 10 high schools had difficulty determining how to report the status of these students. This contributed to the inaccurate graduation and dropout calculations for these 2 high schools (see schools 2 and 4 in Tables 2 and 3).
- c. CEPI should develop alternative training and instruction methods for high schools reporting data with significant errors. CEPI has provided the high schools with numerous reference materials for both SRSD and EDN applications. Although we noted that error rates in specific data fields declined between school years 2002-03 and 2003-04, we still noted significant error rates in some of these fields. To reduce error rates, CEPI needs to consider alternative training and instruction methods, such as contacting schools and, if necessary, providing specialized training related to the data fields with the most significant data quality issues. We noted:
  - (1) For school years 2002-03 and 2003-04, 170 (26.8%) of 635 and 64 (10.2%) of 625 high schools, respectively, reported inaccurate enrollment dates. These high schools reported the annual school start date as the enrollment date for students. The resulting errors contributed to the need for CEPI to re-collect data from the high schools for school years 2002-03 and 2003-04.

CEPI defines the enrollment date as the date that the student originally enrolled in the school district and identifies students new to the district (i.e., transfers in) by determining if the students' enrollment dates are after the fall count date. CEPI adds students who are new to the district to the continuing students who were present on the fall count date to

arrive at an adjusted count. This adjusted count is then compared with the actual fall count from the subsequent year. If the adjusted count exceeds the actual count, the excess students are considered to be unaccounted for or dropouts. By using the annual school start date as the enrollment date, high schools identified continuing students as new students. Therefore, high schools included these students in the adjusted count twice. The duplicated students would be considered dropouts, resulting in a lower graduation rate and a higher dropout rate for those schools.

- (2) Two schools that we visited did not submit final exit status records for 31 (91.2%) of 34 and 14 (23.0%) of 61 students for school year 2003-04. The exit status is used to track movement in or out of districts. The student's exit status identifies whether a student continues, graduates, transfers, or drops out. Students who are enrolled in SRSD who do not have an exit status record and transfer out of State, to a private school, or to a home school will be unaccounted for in SRSD. Students who are unaccounted for will decrease the high school's graduation rate and increase the dropout rate.
- (3) For school year 2003-04, the exit status for 62 (8.0%) of 775 students was inaccurate at the 10 schools we visited. These inaccuracies resulted from using incorrect codes for students who were determined to be graduates or dropouts. Accurate exit status records are necessary to properly account for students in the graduation and dropout rate calculations.

CEPI communicates with authorized users designated by the school district. However, during our high school visits, we noted that school personnel responsible for entering, accumulating, processing, and submitting student data were not always the same individual that the school district had designated to receive CEPI's instructions. As a result, school personnel were often not aware that instructions and other resources were available, which hindered the correction of problems and contributed to the inaccuracies in the data.

## **RECOMMENDATIONS**

We recommend that CEPI provide high schools with sufficient detailed instructions regarding reporting requirements for migrant education students and midterm promotions.

We also recommend that CEPI develop alternative training and instruction methods to address significant data quality issues that exist at the high schools.

## **AGENCY PRELIMINARY RESPONSE**

CEPI agrees with the recommendations and informed us that the State School Aid Act was changed in 2005 and migrant students are no longer excluded from the calculation of graduation and dropout rates. CEPI informed us that it will continue to expand its current training by working with school districts and education associations to implement a data quality curriculum based on the NCES Forum Guide to Building a Culture of Quality Data.

In addition, CEPI informed us that it has:

- Developed Web-based training modules for users.
- Provided detailed information on the CEPI Web site that includes:
  - Frequently Asked Questions
  - Application User Guides
  - Information on how rates are calculated.
- Provided continuous monitoring of and response to Listserv questions.
- E-mailed overview materials and training materials to superintendents, principals, and authorized users of CEPI applications.
- Conducted Statewide "Webinar" training for the Graduation and Dropout Rate application and made those materials available via the CEPI Web site.

CEPI informed us that these efforts have included information about midterm promotions as appropriate.

## SUPPLEMENTAL INFORMATION

## Description of Tables

Table 1 shows an example of the data collected through the pupil headcount report screen in the Education Data Network (EDN) to calculate school year 2003-04 graduation and dropout rates. The Center for Educational Performance and Information (CEPI) summarized the fall 2004 enrollment data, the class of 2004 graduate data, and the out-of-district transfer data reported by the high schools in the Single Record Student Database (SRSD). CEPI populated the applicable fields in the pupil headcount report screen in EDN with the summarized information. CEPI then allowed high schools to modify the summarized totals and to provide updated data for the other fields in the EDN screen that it did not populate with summarized data from SRSD.

Table 2 shows the results of our audit of graduation rates for 10 high schools compared with the graduation rate calculated and reported by CEPI.

Table 3 shows the results of our audit of dropout rates for 10 high schools compared with the dropout rates calculated and reported by CEPI.

Table 4 shows our comparison of graduation and dropout data reported on the SRSD with data on the EDN.

**HIGH SCHOOL GRADUATION AND DROPOUT**  
 Illustration of the Graduation and Dropout Rate Calculation Used by the  
 Center for Educational Performance and Information  
 Department of Management and Budget  
 For School Year 2003-04

	Class of				Total	Description
	2007	2006	2005	2004		
1. Headcount, fall 2003	341	257	235	223	1,056	Automatically brought forward from the 2003-04 pupil headcount report screen as submitted by high schools via the Education Data Network. This file could not be adjusted by the high schools.
2. Transfer information:						Transfer information was from the period September 24, 2003 through September 21, 2004.
a. Transfer in, from other districts (+)	32	5	7	3	47	These numbers represent students who entered the district from another district.
b. Transfer in, within same district (+)	15	10	25	1	51	These numbers represent students with grade level changes or movement within the district.
c. Transfer out, to other district (-)	5	15	10	21	51	These numbers represent students who transferred to other districts.
d. Transfer out, within same district (-)	10	5	7	0	22	These numbers represent students with grade level changes or movement within the district.
e. To alternative program (-)	0	6	0	0	6	These numbers represent students who left the district for an Alternative Education Program.
Net transfers	32	(11)	15	(17)	19	
3a. Retained, for school year 2003-04 (-)	38	27	13	10	88	These students were not promoted to the next grade level. These students were subtracted out of their current graduating class (line 3a) and added into the next lower graduating class (line 3b).
3b. Retained, for school year 2004-05 (+)	27	13	10	0	50	See description for line 3a.
4. Adjusted count	362	232	247	196	1,037	The fall 2003 headcount (line 1) is adjusted based on all of the transfers and retained-in-grade students (lines 2 through 3b).
5. Headcount, fall 2004	327	222	244		793	This is the actual fall 2004 headcount as reported by high schools.
6. Graduates, class of 2004				188	188	These numbers represent graduates receiving a diploma from a regular high school program.
7. Total from lines 5 and 6					981	
8. Unaccounted for (dropouts)	35	10	3	8	56	Dropouts are students who are not accounted for in the headcount, transfers, or retained in grade (lines 1 through 3b). This amount is automatically calculated by subtracting the fall 2004 headcount (line 5) from the adjusted count (line 4).
9. Class retention rates	90.33%	95.69%	98.79%	95.92%	94.60%	This is calculated by dividing the fall 2004 headcount (line 5) or the class of 2004 graduates (line 6) by the adjusted count (line 4) times 100.
10. Class dropout rates	9.67%	4.31%	1.21%	4.08%	5.40%	This is calculated by subtracting the class retention rate (line 9) from 100%.
11. Reported Rates: Four-year graduation:	81.90%			One-year dropout:	5.40%	The four-year graduation rate is calculated by multiplying the individual class retention rates together (line 9). The one-year dropout rate is calculated by subtracting the total class retention rate from 100%.

HIGH SCHOOL GRADUATION AND DROPOUT RATES  
 Department of Management and Budget  
 Graduation Rates Calculated by the  
 Center for Educational Performance and Information (CEPI) for Selected Schools  
For School Years 2002-03 and 2003-04

Number of High Schools Reviewed = 10

School	Reported Fall 2004 Enrollment	School Year 2002-03		Difference Overreported (Underreported)	School Year 2003-04		Difference Overreported (Underreported)
		Reported Graduation Rate	Audited Graduation Rate		Reported Graduation Rate	Audited Graduation Rate	
1	1,500	95.3%	94.7%	0.6%	100.0%	94.3%	5.7%
2	1,400	81.4%	80.3%	1.1%	42.8%	80.3%	(37.5%)
3	1,400	30.8%	45.9%	(15.1%)	50.1%	44.7%	5.4%
4	650	64.3%	86.2%	(21.9%)	73.5%	83.3%	(9.8%)
5	550	95.6%	92.1%	3.5%	95.5%	92.1%	3.4%
6	500	82.0%	84.6%	(2.6%)	85.0%	77.2%	7.8%
7	400	78.3%	82.1%	(3.8%)	95.5%	92.3%	3.2%
8	300	100.0%	84.3%	15.8%	Not Reported*	81.6%	(81.6%)
9	100	100.0%	93.0%	7.0%	90.1%	86.6%	3.5%
10	100	77.1%	79.8%	(2.7%)	75.3%	67.8%	7.5%

The results indicate that CEPI reported to the Legislature and the Michigan Department of Education (MDE) inaccurate graduation rates for school years 2002-03 and 2003-04 for all schools that we visited (Finding 1). For school year 2002-03, reported graduation rates for 5 high schools (1, 2, 5, 8, and 9) were higher than the audited rate and reported graduation rates for 5 high schools (3, 4, 6, 7, and 10) were lower than the audited rate. For school year 2003-04, reported graduation rates for 7 high schools (1, 3, 5, 6, 7, 9, and 10) were higher than the audited rate, reported rates for 2 high schools (2 and 4) were lower than the audited rate, and 1 high school (8) did not report. The high school graduation rate is one criteria used by MDE to determine adequate yearly progress (AYP) under the No Child Left Behind Act of 2001.

The results also show that high schools 4 and 7 met the graduation rate requirement of 80% necessary to achieve AYP for school year 2002-03 and high schools 2 and 4 met the graduation rate requirement of 80% necessary to achieve AYP for school year 2003-04. However, based on the reported rates, MDE reported that the high schools did not achieve AYP (Finding 1).

The results also indicate that 1 high school (6) did not meet the graduation rate requirement of 80% necessary to achieve AYP for school year 2003-04. However, based on the reported rates, MDE reported that the high school did achieve AYP.

The audited rates represent a recalculation of the high schools' graduation rates using any supporting documentation available at the high schools and Statewide data available on the Single Record Student Database.

\* This school district did not submit data to CEPI for school year 2003-04.

Table 3

HIGH SCHOOL GRADUATION AND DROPOUT RATES  
 Department of Management and Budget  
 Dropout Rates Calculated by the  
 Center for Educational Performance and Information (CEPI) for Selected Schools  
For School Years 2002-03 and 2003-04

Number of High Schools Reviewed = 10

School	Reported Fall 2004 Enrollment	School Year 2002-03			School Year 2003-04		
		Reported Dropout Rate	Audited Dropout Rate	Difference Overreported (Underreported)	Reported Dropout Rate	Audited Dropout Rate	Difference Overreported (Underreported)
1	1,500	1.2%	1.4%	(0.2%)	0.0%	1.5%	(1.5%)
2	1,400	5.3%	5.4%	(0.1%)	18.4%	5.1%	13.3%
3	1,400	24.6%	18.0%	6.6%	17.2%	20.9%	(3.7%)
4	650	11.6%	3.7%	7.9%	8.5%	4.7%	3.8%
5	550	1.1%	2.0%	(0.9%)	1.1%	2.0%	(0.9%)
6	500	5.0%	4.3%	0.7%	4.7%	6.9%	(2.2%)
7	400	5.7%	4.6%	1.1%	1.0%	2.1%	(1.1%)
8	300	0.0%	4.2%	(4.2%)	Not Reported*	6.3%	(6.3%)
9	100	0.0%	1.9%	(1.9%)	2.8%	3.7%	(0.9%)
10	100	6.4%	5.4%	1.0%	5.8%	7.8%	(2.0%)

The results indicate that CEPI reported to the Legislature and the Michigan Department of Education inaccurate dropout rates for school years 2002-03 and 2003-04 for all 10 high schools that we visited (Finding 1). For school year 2002-03, the reported dropout rates for 5 high schools (1, 2, 5, 8, and 9) were lower than the audited dropout rates and the reported dropout rates for 5 high schools (3, 4, 6, 7, and 10) were higher than the audited dropout rate. For school year 2003-04, the reported dropout rates for 7 high schools (1, 3, 5, 6, 7, 9, and 10) were lower than the audited dropout rate, the reported dropout rate for 2 high schools (2 and 4) were higher than the audited dropout rates, and 1 high school (8) did not report. A lower number of dropouts has a positive impact on the overall graduation rate and a higher number of dropouts has a negative impact on the overall graduation rate.

The audited rates represent a recalculation of the high schools' dropout rates using any supporting documentation available at the high schools and Statewide data available on the Single Record Student Database.

\* This school district did not submit data to CEPI for school year 2003-04.

**HIGH SCHOOL GRADUATION AND DROPOUT RATES**  
 Department of Management and Budget  
 Comparison of Data Reported on the Single Record Student Database (SRSD) With  
 Data on the Education Data Network (EDN)  
For School Years 2002-03 and 2003-04

Number of High Schools that Reported Data for School Year 2002-03 = 632  
 Number of High Schools that Reported Data for School Year 2003-04 = 623

Student Status	School Year 2002-03		Difference Overreported (Underreported)	Percentage Difference Over (Under)	School Year 2003-04		Difference Overreported (Underreported)	Percentage Difference Over (Under)
	SRSD Data	EDN Data			SRSD Data	EDN Data		
Enrolled	476,993	481,954	(4,961)	(1.0%)	493,979	494,524	(545)	(0.1%)
Graduate	81,336	100,301	(18,965)	(18.9%)	92,056	98,819	(6,763)	(6.8%)
Transfer into district	128,293	32,670	95,623	74.5%	53,226	35,612	17,614	33.1%
Transfer out of district	28,886	44,213	(15,327)	(34.7%)	33,700	52,504	(18,804)	(35.8%)
Dropouts	26,112	19,244	6,868	26.3%	24,372	13,718	10,654	43.7%

This information illustrates that high schools modified data previously submitted to SRSD when the Center for Educational Performance and Information (CEPI) re-collected the data through EDN. CEPI and the high schools believe that the data submitted via EDN is more accurate than the data submitted via SRSD. However, CEPI reported the SRSD data to the National Center for Educational Statistics (Finding 3).

Transfers for school year 2002-03 were incorrectly populated in EDN, which contributed to the differences noted (Finding 4).

# GLOSSARY

## Glossary of Acronyms and Terms

adequate yearly progress (AYP)	The measure used to hold schools and districts responsible for student achievement in English language arts and mathematics. AYP is based on Michigan Educational Assessment Program (MEAP) test results, participation rates in MEAP testing, and attendance or graduation rates.
advisory committee	A committee to provide advice to the CEPI director regarding the management of CEPI's data collection activities as defined in Section 388.1694a of the <i>Michigan Compiled Laws</i> . The committee consists of members appointed by the State Budget Director from each of the following groups: House Fiscal Agency, Senate Fiscal Agency, Office of the State Budget, Michigan Department of Education, Department of Labor and Economic Growth, Department of Treasury, Michigan Association of School Boards, Michigan Association of School Administrators, Michigan school business officials, private firms' auditing schools, intermediate school districts, and any other members appointed by the State Budget Director.
CEPI	Center for Educational Performance and Information.
Control Objectives for Information and Related Technology (COBIT)	A framework, control objectives, and audit guidelines developed by the Information Systems Audit and Control Foundation (ISACF) as a generally applicable and accepted standard for good practices for controls over information technology.
Education Data Network (EDN)	An electronic network used to collect pupil information for calculating graduation and dropout rates.
material condition	A 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 judgment

of an interested person concerning the effectiveness and efficiency of the program.

MDE Michigan Department of Education.

National Center for Educational Statistics (NCES) The primary federal entity for collecting, analyzing, and reporting data related to education in the United States and other nations. NCES activities are designed to address high priority education data needs; to provide consistent, reliable, complete, and accurate indicators of education status and trends; and to report timely, useful, and high-quality data to the U.S. Department of Education, the Congress, the states, other education policymakers, practitioners, data users, and the general public.

No Child Left Behind (NCLB) Act of 2001 The federal law that authorizes funding and contains the current requirements for Title I and other federal educational programs.

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.

reportable condition A matter that, in the auditor's judgment, 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 year The start of a school's academic year to August 31.

SRSD Single Record Student Database.

USDOE U.S. Department of Education.



